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# What Do We Owe the Next Generation(s)

Axel P. Grosseries

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## WHAT DO WE OWE THE NEXT GENERATION(S)?

*Axel P. Gosseries\**

*We must now consider the question of justice between generations . . . . It subjects any ethical theory to severe if not impossible tests.<sup>1</sup>*

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1. JOHN RAWLS, A THEORY OF JUSTICE 284 (1971) [hereinafter THEORY OF JUSTICE (1971)].

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## I. INTRODUCTION

Any comprehensive philosophical theory of intergenerational justice should provide an answer to at least three questions. First, *what is a generation?* Do we take it as a whole with independent status or as a mere aggregate of individuals? Should we treat "birth cohorts" issues and "age groups" issues differently?<sup>2</sup> Second, *do we owe anything to future and past people?* Don't people need to exist to have rights? Wouldn't future people be better off with a polluted environment than with not existing at all? And does it make any sense to claim respect for dead people and to define consecutive obligations towards them? Third, *if we do have obligations, at least to the people of the future, how should we define them?*

The present article will only address the third question. As to the first question, generations will be taken as birth cohorts, that is, sets of individuals born during a certain period, without implying any rejection of moral individualism or the need for any "generational consciousness." As to the second question, I shall assume that we *do* have obligations, at least to *future* generation(s). Lack of space does not allow me to address fundamental challenges such as the "non-identity" argument.<sup>3</sup> Basically, the idea is that most of our actions affect the very *identity* of the people who will be brought to life in the future. However, our classical concept of harm is *identity dependent*. That is, it implies a comparison between the current state of a person and the *same* person's counterfactual situation, had the allegedly harmful action not taken place. When dealing with future people, we find ourselves in situations where the absence of an allegedly harmful action (e.g., burying radioactive wastes unsafely) would also have meant the *inexistence* of the allegedly harmed person (e.g., the future victim of radioactive leakage). For most of our actions

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2. For a theory of justice between age groups, see generally NORMAN DANIELS, AM I MY PARENTS' KEEPER? AN ESSAY ON JUSTICE BETWEEN THE YOUNG AND THE OLD (1988) [hereinafter DANIELS, AM I MY PARENTS' KEEPER?] and NORMAN DANIELS, JUSTICE AND JUSTIFICATION 257-83 (1996) [hereinafter DANIELS, JUSTICE AND JUSTIFICATION].

3. See generally DEREK PARFIT, REASONS AND PERSONS 351-79 (1984) (discussing the nonidentity problem); MELINDA A. ROBERTS, CHILD VERSUS CHILDMAKER: FUTURE PERSONS AND PRESENT DUTIES IN ETHICS AND THE LAW (1998) (addressing the nonidentity challenge).

affect the temporal sequence of our actions, including the moment of our sexual intercourse. As a result, they will also affect the very identity of the people who will be born. The classical notion of harm cannot therefore operate anymore in such a nonidentity situation. I believe that this should not lead us to conclude that many of the actions that we would regard intuitively as harmful to future generations should be considered harmless. I have argued elsewhere that it requires instead a modification of our concept of harm.<sup>4</sup>

I shall also focus here on our obligations towards the *next* generation, not only as opposed to the previous ones, but above all as opposed to more remote future cohorts. This has nothing to do with a possible lack of moral importance of far remote people. I believe instead that obligations to remote future generations can be dealt with through the prism of our obligations towards the generation that directly follows us. The test case is the "time bomb" example,<sup>5</sup> a situation where the current generation sets up a bomb that will only explode in a hundred years and will therefore leave the next generation's life unaffected while causing, *ex hypothesi*, heavy damage to the following generation. The key point is that there is a sense in which this also imposes a liability on the former. In effect, were the next generation willing to not transfer such a bomb to the generation that follows, it would have to invest in a means to disconnect the bomb's mechanism or to compensate for the consequences of its explosion. Hence, if we care about the generation that comes next ("neighboring-generations" model) and consider its obligations towards the one that will follow it, we will necessarily care about future generations beyond the one that follows us directly. In other words, the current generation cannot be held responsible for the possible violation by the next one of its intergenerational obligations.

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4. See Axel Gosseries, *Intergenerational Justice: Probing the Assumptions, Exploring the Implications* 82-92 (2000) (unpublished Ph.D. thesis, University of Louvain (on file with author)).

5. See AVNER DE-SHALIT, *WHY POSTERITY MATTERS: ENVIRONMENTAL POLICIES AND FUTURE GENERATIONS* 124 (1995); Richard Routley & Val Routley, *Nuclear Energy and Obligations to the Future*, 21 *INQUIRY* 133, 141-45 (1977); FRANCES WOOLLEY, *INTERGENERATIONAL ALTRUISM AND THE IRRELEVANCE OF REDISTRIBUTION IN RAWLS' ORIGINAL POSITION* 2, 10-12 (London School Econ., Discussion Paper No. TIDI/131, 1989) (focusing on sleeper effects).

However, it should make sure to transfer to the next generation enough for that generation to be capable in turn to satisfy its own intergenerational obligations. If the next generation has been made incapable by the current generation of satisfying its obligations to its followers, it is the current generation that should be held responsible.<sup>6</sup>

The aim of this paper is to investigate what an egalitarian should propose as a principle of justice between cohorts. In order to do so, I shall start with the presentation and critique of several possible views on justice between cohorts, namely a reciprocity-based view (Part II), a Lockean view (Part III), and a Rawlsian view, including a short discussion as to why utilitarians are in trouble in the intergenerational context (Part IV). Parts II-IV will thus offer the background against which the proposed egalitarian principle will be contrasted. In Part V, I shall show why (and to what extent) egalitarians should depart from the "principle of just savings" proposed by John Rawls. After a brief recapitulation of the various theories at stake (Part VI), I shall then turn to two sets of implementation issues. The first has to do with the metrics to be used to implement the proposed principle (Part VII). The second has to do with the manner in which different rates proposed (benefit ratio, savings rate, social discount rate) are to be dealt with in an egalitarian theory of intergenerational justice (Part VIII). As a whole, this paper is both an attempt to provide relatively broad coverage of the substantive philosophical issues at stake, as well as an explication and a defense of an egalitarian view on the matter. It will not be possible, however, to provide the reader with a *general* defense of egalitarianism beyond the intergenerational context.

## II. THE FRAGILITY OF INDIRECT RECIPROCITY

A common way of conceptualizing our obligations to the next generation is the following: We borrow the earth from our children. What follows from this folk conception is that each generation should reconstitute to the next the earth in a state at least equivalent to what it was when it received it. This idea of having to pay a debt

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6. This type of regression is termed a "zipper" argument. *See infra* note 13 and accompanying text (relating another example).

back<sup>7</sup> is what the concept of indirect (or open) reciprocity is pointing at under a special form: We received something from someone and we owe it back to someone else. The adjective "indirect" refers to the fact that the beneficiary of my action is *different* from the person who benefited me in the first place, as opposed to a situation where I give back to the *same* person (direct or closed reciprocity). What underlies this idea of reciprocity, no matter its indirectness, is a notion of *commutative* justice, that is, one of equivalence in respective contributions, be it between the benefits received and what was returned in exchange (e.g., in a contractual relationship), or between a harm caused and what was paid to repair it or compensate for it (e.g., in cases that typically fall under the realm of tort law).<sup>8</sup> Put together, indirect (or open) reciprocity obligations form a *chain* of obligations carrying us from one person to the next, from one generation to the following one. One may thus expect such a concept of indirect reciprocity, provided we define a proper metrics, to be adequate in accounting for our obligations towards future generations. Is it so however?

In fact, indirect reciprocity is being used to play two related but *distinct* roles. On the one hand, it is being relied upon to *justify the existence* of obligations towards future people, given that the latter are generally assumed not to have benefited us in any sense. Here, the idea is that we owe something to the next generation *because* we received something from the previous generation. On the other hand, indirect reciprocity is also referred to with the aim of *defining the content* of our obligations towards future people: *what* we owe to future people is (at least) as much as what we received from previous generations. Let us call this latter use a *substantive* maxim and the former a *justificatory* maxim. While adopting the justificatory

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7. See LÉON BOURGEOIS, SOLIDARITÉ 115 (3d ed. 1902) (using the ambiguous notion of "social debt" which implies a debt toward past, present, and future people, grounded in the accumulated works of past generations); Christian Azar & John Holmberg, *Defining the Generational Environmental Debt*, 14 ECOLOGICAL ECON. 7, 7-19 (1995) (applying the notion of debt to the environmental realm).

8. On the idea of commutative justice, see generally BRIAN BARRY, *Justice as Reciprocity*, in 2 LIBERTY AND JUSTICE: ESSAYS IN POLITICAL THEORY 211, 213-14 (1989), which discusses quid pro quo and the general social belief that one good turn deserves another.

maxim will generally entail the adoption of the substantive one, the reverse is not necessarily true. One may very well agree with the idea that we ought to transfer at least as much as what we received to the next generation while advancing as a reason that we simply don't see why mere temporal location should provide any advantage to one generation over the next one.

TABLE 1: THE JUSTIFICATORY (J) AND THE SUBSTANTIVE (S)  
INDIRECT-RECIPROCITY-BASED MAXIMS

	<i>Existence</i>	<i>Content</i>
<i>Justification</i>	J: $G_c$ owes $G_n$ something because it received something from $G_p$	
<i>Definition</i>		S: What $G_c$ owes $G_n$ is at least as much as what $G_c$ received from $G_p$

Symbols:  $G_c$  = current generation,  $G_n$  = next generation,  $G_p$  = previous generation.

With this distinction at hand, let us look at the critiques that can be formulated against the use of a notion of commutative justice to account for our intergenerational obligations.<sup>9</sup> We can identify at least three key objections to a “reciprocity-based” view of intergenerational justice. The first and strongest one is the “gift-obligation” objection. It asks whether each and every gift should give rise to

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9. See *id.* at 231-38; see also DIETER BIRNBACHER, VERANTWORTUNG FÜR ZUKÜNFTIGE GENERATIONEN [RESPONSIBILITY FOR FUTURE GENERATIONS] § 3.3.3 (1988) (discussing compensatory justice); Jane English, *What Do Grown Children Owe Their Parents?*, in AGING AND ETHICS: PHILOSOPHICAL PROBLEMS IN GERONTOLOGY, 147-70 (Nancy S. Jecker ed., 1991).



related obligations on the side of its beneficiary.<sup>10</sup> It is thus an objection addressed primarily at the justificatory maxim.

Why would the mere fact of receiving something necessarily justify our having an obligation to give back? Admittedly, in some circumstances, what we perceive as gifts may in fact create obligations (e.g., accepting a beer from someone in a pub). However, one should at least always be able to refuse such an obligation-creating gift. This is why, for instance, the gift of life should not be able to bind us to give life in turn. In short, if we need at least to be able to understand a gift's meaning and be free to refuse it, then the obligations that may follow on our side will probably be due more to our acceptance of the gift and the obligations attached to it, than to the gift itself.

The next objection, the "past-future" one, attacks the two reciprocity-based maxims from another angle.<sup>11</sup> It challenges the idea that by receiving something from the *previous* generation, we owe reciprocation to the *next* generation. For, is there anything in the concept of indirect reciprocity as such that requires such a temporal orientation? Why would reciprocation towards the worst-off among my contemporaries not empty my bag of obligations as well? Why wouldn't an employment policy benefiting the disadvantaged of today not constitute a requital as appropriate as an investment in cancelling my state's public debt? If this were possible, it would not hold anymore that the current generation would have to pass on to the *next* generation at least the equivalent of what the former received.

Moreover, doesn't the same past-future objection take a more radical form once we consider the existence of intergenerational overlap?

Admittedly, once we put together the idea of debtors (current generation) without any direct creditors (now dead previous generation) and creditors (future generation) without direct debtors, we find a debtor (the current generation) and an alleged creditor (the future generation) that can be connected through a concept of indirect reciprocity. We substitute the next generation for the previous one as

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10. See BARRY, *supra* note 8, at 231-38.

11. See *id.*

creditor of the current one. Still, the problem is that the justificatory maxim we end up with will not necessarily lead us to the substantive maxim since the intergenerational *overlap* makes it possible, for example, to reciprocate to my parents part of what I received from them. Were we to stick to a reciprocity concept, it would then not be true that I would owe my children *at least as much as* what I received from my parents because my obligation to my parents would already have been partially discharged on them (e.g., through caring for them in their old days). What would then be left for my children would be less than what I received from my parents. Thus, if we were able to discharge our commutative obligations *fully* on our parents, there would be no obligations left to our children.

The past-future objection, be it in its plain form (why not to my poorest contemporaries, instead of to members of the next generation?), or in its overlap version (why not to my very parents, instead of to members of the next generation?) may not, however, be as robust as it seems.<sup>12</sup> For, suppose that the population remains stable over time and that we live in a world where, so far, each generation has passed on to the next the equivalent of \$1000 per head. Take first the overlap version of the past-future objection. Let us assume that the current generation is considering giving back to the previous one \$200 per head (e.g., in the form of expensive health care for elderly people). It would then only have a debt left of \$800 towards the next generation. The problem is that the previous generation will then end up with having received \$1200 per head and having given to the next one a net amount of \$800. Thus, if the late members of that previous generation want to ensure that they will have complied with their own reciprocity-based obligations, they will have no choice but to refuse the \$200 per head proposed by the current generation. In other words, the option of partially emptying its bag of obligations to the benefit of members of the *previous* generation is only available if the current generation is ready to force the previous generation to have violated its own obligations.<sup>13</sup>

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12. I am indebted to Philippe Van Parijs for pointing out the above counter-argument to me.

13. See *supra* note 6 and accompanying text for another "zipper" argument.

Thus, "intergenerational compliance" with the reciprocity-based maxim implies that reciprocation benefits the *next* generation. In other words, the obligation to reciprocate to *future* generations (as opposed to the past one) is then not due to an *impossibility* to reciprocate to the previous generation. Instead, it needs to be traced back to the *unacceptability* of doing so, if one does not want to force the earlier generation itself to violate the reciprocity-based rule.

Now, we still haven't shown that the intergenerational compliance counter-objection equally holds for the plain version of the past-future objection, namely the view that asks, "Why not to the poorest of my contemporaries?" I believe, however, that a more straightforward counterobjection will do here. The problem with this plain version is that it conflates intergenerational justice and intragenerational justice. What we care about here is whether a group (a generation as a whole) will pay its debt back to another group that is located at a different moment in time. If we look at natural resources, for example, we can argue that each of the members of the current generation, even the most disadvantaged ones, has received from the previous generation a share of the natural resources. Thus, under a reciprocity-based logic, even the most disadvantaged members of the current generation owe their share of natural resources (in kind or equivalent) back to members of the next generation. Whether reciprocity-based (or other) obligations simultaneously hold between members of the *same* generation is another matter. Thus, we have now rejected the two forms of the past-future objections, on the basis of, respectively, an intergenerational compliance counterobjection and of a "conflation" counterobjection.

Our third objection, the "first generation" one, stresses that both the justificatory and the substantive maxims may well have negligible consequences in practice. The idea is that since the maxim is *inapplicable* to the first generation, it may prove of little use to subsequent generations because the first generation received what it has *from no one*. Why would it then be bound to reciprocate anything to anyone? The justificatory maxim would thus not be violated if the first generation were to spoil ninety-nine percent of what it "inherited." It would only leave to the second generation one percent of what it received (from no one). Doesn't this show that the commutative account may fail to justify a meaningful chain of obligations?

There is, moreover, a sense in which *each* generation is a first generation for what was discovered by some of its members (e.g., the moon, the Antarctic, etc.). And to the extent that we are all a *first* generation, we can defend the view that part of what we have received was from nobody.<sup>14</sup>

As we have said, the principle of reciprocity is a principle of justice in transfers, a concept of commutative justice. Theories of justice, be they of the "historic entitlement" type or of the egalitarian type, generally rely on such a principle as part of their apparatus. For such theories however, commutative justice is never the alpha and omega of justice. We have seen that both the "gift obligation" and the first generation objections are serious challenges to a reciprocity-based view of intergenerational justice. We shall now examine how entitlement (Lockean) and Rawlsian theories fare with respect to justice between cohorts and to what extent both types of theories depart from the substantive maxim of justice as reciprocity.

### III. SHOULD LOCKEANS CARE ABOUT PREHISTORY?

In this section, I shall focus on a very different type of theory of justice, which I shall call Lockean, since it is derived from some of John Locke's work.<sup>15</sup> Let us assume that while the world is initially commonly owned, there is something that is privately owned: ourselves (self-ownership). This implies (negatively) duties of non-interference on others. But it also entails (positively) that, as we own ourselves, the product of our labour capacity could be owned as well. For why should anybody else be entitled to own what is the product of self-owned labour? This "mixing with labour" theory of appropriation thus derives our property of some parts of the outside world from our self-ownership.<sup>16</sup>

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14. See, e.g., Marcel Wissenburg, *An Extension of the Rawlsian Savings Principle to Liberal Theories of Justice in General*, in FAIRNESS AND FUTURITY 173, 180 (Andrew Dobson ed., 1999). Compare the above with that of a "free lunch" generation when setting up a pay-as-you-go pension system.

15. See JOHN LOCKE, *SECOND TREATISE OF GOVERNMENT* (C.B. MacPherson ed., Hackett Pub'g Co. 1980) (1690).

16. See Gijs Van Donselaar, *The Benefit of Another's Pain: Parasitism, Scarcity, Basic Income* (1997) (unpublished Ph.D. thesis, University of Amsterdam) (on file with author) (discussing the labour principle of original acquisition). But see ROBERT NOZICK, *ANARCHY, STATE, AND UTOPIA* 174-75

Lack of space disallows us from discussing each element of the Lockean theory. There are two provisos that constrain legitimate appropriation and that render a Lockean theory significantly different from a "first come, first served" one: the "no waste" proviso and the "equivalence" proviso.<sup>17</sup> There has been much discussion as to what Locke really meant when he claimed that appropriation can be legitimate "at least where there is enough, and as good, left in common for others."<sup>18</sup> It would not make much sense to consider the "enough" component as a distinct necessary element. Were we not to have enough for all, would we all be bound to commit collective

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(1974) (discussing the example of owned tomato juice mixed with the unowned sea and asking why should mixing an owned object with an unowned one lead to the ownership of the resulting object, rather than to the loss of ownership of the initially owned object). In addition, as Nozick asks, "Why should one's entitlement extend to the whole object rather than just to the added value one's labour has produced?" *Id.* at 175; see also HILLEL STEINER, AN ESSAY ON RIGHTS 242-48 (1994) (inquiring why people should have self-ownership since they are all the fruit of someone else's procreative labour).

17. The other proviso is the "no-waste" (or "spoilage") one. See LOCKE, *supra* note 15, at 20-21; Richard J. Arneson, *Lockean Self-Ownership: Towards a Demolition*, 39 POL. STUD. 36, 50 (1991). This proviso requires people not to appropriate more than they can use themselves, without letting things get spoiled. This raises at least two issues. First, what happens when monetary systems are being put in place, money being nonperishable? Doesn't the clause become useless and isn't the distinction between consumptive and non-consumptive uses rendered meaningless once what is not being consumed can be traded? See C.B. MACPHERSON, *THE POLITICAL THEORY OF POSSESSIVE INDIVIDUALISM: HOBBS TO LOCKE* 203-11 (Oxford Univ. Press 1979) (1962); Van Donselaar, *supra* note 16, at 77. Second, doesn't a consistent reading of the word "spoilage" also require that "only the person who will put the land to its most productive use has the right to appropriate it (or maintain it) as his private property"? Arneson, *supra*, at 53. In other words, isn't efficient use a prerequisite of entitlement? Finally, the reader should recall that one of the problems with the "indirect-reciprocity-based" account of intergenerational justice is that it remains unable to justify constraints on the first generation. See discussion *supra* Part II. In contrast, the "no-waste" proviso may be able to do so, since it would not allow the first generation to spoil what they received. For a recent contribution on the "spoilage" proviso, see Avery Kolers, *The Lockean Efficiency Argument and Aboriginal Land Rights*, 78 AUSTRALASIAN J. PHIL. 391 (2000).

18. LOCKE, *supra* note 15, at 19. This is what we are referring to as the "equivalence proviso." See G.A. COHEN, *SELF-OWNERSHIP, FREEDOM, AND EQUALITY* 75-87 (1995); Jeremy Waldron, *Enough and As Good Left for Others*, 29 PHIL. Q. 319, 320 (1979) ("Locke did not intend the clause to be taken as a restriction or a necessary condition on appropriation.").

suicide?<sup>19</sup> We shall also consider that “as good” can be interpreted as “as much,” since not talking in terms of equivalence would also have counterintuitive consequences.<sup>20</sup> We can thus rephrase the clause as: “at least where there is as much left in common for others.”

The next question we have to address is the following: as much *as what*? For example, imagine a world with three people (A, B, and C). A appropriates a good *x*. Under what condition is A’s appropriation legitimate? Does she need to leave to B and C as much (per capita) as she appropriates, or as much as they would otherwise have had (comparative-to-counterfactual)?<sup>21</sup> It is the latter interpretation that we can regard as standard.

Now, what about implementing the equivalence proviso in the intergenerational context?<sup>22</sup> Take Arneson’s proposal: “[T]he continued legitimacy of private ownership from the standpoint of self-ownership depends on each . . . successive generation obtaining the equivalent of a per capita share of unimproved, undegraded land.”<sup>23</sup> I shall argue that there are *three* significantly different interpretations of this rule. Each interpretation derives from a different conception of what we should understand as “unimproved, undegraded land.” The first possible interpretation is as follows: *Each generation should leave to the next at least as much (in equivalence) as the first (prehistoric) generation initially appropriated.* Such an interpretation assumes that we should focus on the original unimproved, undegraded land and leave aside what could (possibly) have been added by the successive generations.<sup>24</sup> Doesn’t this exclusion of the

19. See COHEN, *supra* note 18, at 77 n.20 (arguing that “enough” is superfluous); Waldron, *supra* note 18, at 325; Clark Wolf, *Contemporary Property Rights, Lockean Provisos, and the Interests of Future Generations*, 105 ETHICS 791, 795 n.19 (1995).

20. See discussion *infra* Part VII.

21. On the range of possible counterfactuals and a critique of Nozick’s common ownership/free use, see COHEN, *supra* note 18, at 78-83.

22. For Lockean theories of intergenerational justice, see STEINER, *supra* note 16, at 268-73; Arneson, *supra* note 17, at 52-53; Robert Elliot, *Future Generations, Locke’s Proviso and Libertarian Justice*, 3 J. APPLIED PHIL. 217 (1986); Wolf, *supra* note 19, at 798-99.

23. Arneson, *supra* note 17, at 53 (emphasis added) (“[T]he appropriate baseline of compensation is a per capita share of unimproved land.”).

24. See, e.g., Michael Otsuka, *Self-Ownership and Equality*, in LEFT-

product of each generation's labour follow naturally from the Lockean doctrine? What this means is that we need a separate accountancy for raw natural resources and for cultural products. It does not mean, however, that the degradation of natural resources (e.g., coal extraction) cannot be compensated by cultural products (e.g., advanced solar energy technology).<sup>25</sup>

Under the first intergenerational interpretation of the proviso, the notion of unimproved, undegraded land is interpreted so as to exclude the fruits of *human* intervention. There is, however, no reason to exclude exogenous *natural* causes of improvement or degradation that would have occurred since prehistory. The nature and composition of the transgenerational commons may well change across time *for nonanthropic reasons*. It may indeed be that the prehistoric unimproved, undegraded land would be different from the one that the next generation would have come across had no generation existed before this next one.

For example, earthquakes or exogenous climatic trends may well have developed since prehistory that would affect radically the productivity of the land today, even in the absence of any human beings. And it may well be that the previous generation was the first victim of a small glaciation that will last for another two generations.

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LIBERTARIANISM AND ITS CRITICS: THE CONTEMPORARY DEBATE 163 (Peter Vallentyne et al. eds., 2000) ("[A]s I will argue, the egalitarian proviso, when fully spelled out, requires that the members of each succeeding generation have at least as great an opportunity to own worldly resources *as did the first generation to acquire resources out of the state of nature.*") (emphasis added). Robert Elliot argues that this would also be Nozick's "state-of-nature-based" interpretation. See Elliot, *supra* note 22, at 220-24.

25. Then, if we adopt a *per capita* interpretation of this version of the proviso, depending on whether we have a narrow or wide view on appropriation, and keeping in mind the growth of the earth's population since prehistory, our obligations to the next generation would be respectively ridiculously small or unbearably heavy. They would indeed be very small, despite the population increase, if we consider what each prehistoric person were appropriating *in fact*. Nonetheless, they would be extremely heavy if we were to ask the current generation to leave to the next at least as much in natural resources (or equivalent) as the total amount of the earth's resources divided by the (small) number of prehistoric people. These would be huge shares. Also, notice that there is a connection between this question and whether prehistoric populations can be regarded as having been affluent or not. On this, see *infra* Part V on the accumulation phase (SAHLINS) and Part III, paragraph 12 on whether such Lockean provisos should include a *per capita* clause.

Suppose that this has a globally *degrading* effect (in terms of land productivity, biodiversity, etc.). Why would the current generation have to make up for such a *naturally caused* difference between the way the prehistoric world was and the way it would have been tomorrow in the absence of any human intervention? Is there any reason why the current generation should worry about compensating for the impact of such a glaciation so as to make sure that the next generation could benefit from a level of resources equivalent (per capita) to the prehistoric one?

The Lockean answer is "no." A situation where no other generation had ever existed before is certainly one in which Lockeans would find no intergenerational unfairness. As long as the current generation behaves in such a way that it leaves at least as much as the resources that the next generation would have had *in its predecessors' absence*, Lockeans should have nothing to worry about, *ceteris paribus*. Thus, whether we should care about prehistory or not has nothing to do with whether dead people have rights. It has to do with whether we should take the level of prehistoric resources as a baseline for how much we should pass on to the next generation. As the answer is negative, we can thus replace our first formulation of the intergenerational equivalence proviso with another one: *Each generation should leave to the next one at least as much as what the next generation could appropriate, had no earlier generation existed—or better—had no earlier generation degraded or improved what it inherited*. Things should be as if the next generation were the first one on Earth. The notion of unimproved, undegraded land is thus replaced by "*anthropically* unimproved, undegraded land."

There is a further two-part question that still needs to be addressed. Why should the current generation have to compensate for *degradations* that may have resulted from the earlier generation's activities? And in the contrary hypothesis of a manmade global *improvement*, why should the current generation not be bound to leave to the next the accumulated product of the previous generation's labour, even if it comes as a surplus to a transfer in equivalence of what the unimproved, undegraded land would require? Take the hypothesis of a global improvement. One may perfectly understand in Lockean terms that the *current* generation would not be bound to leave to the next one the fruit of *its own* labour. It could spend it as it



likes as long as it abides by the Lockean principle of intergenerational justice. It does *not* follow, however, that it could also spend as it wishes the fruit of *other* earlier generation's labour. It is perfectly compatible with the two previous intergenerational interpretations of the equivalence proviso that the current generation could *spend for its own use* the accumulated product of all the previous generations' labour, to the extent that it could still satisfy what is required by each of these interpretations. However, not only does this not seem very counterintuitive, it is also not required by a Lockean approach, unless we consider that people still have rights over the fruits of their labour after they die.<sup>26</sup> For sure, as soon as we consider that dead people's estates become part of the unimproved, undegraded land at death, we get a third interpretation referring to the land as it would be, deduction made of the product of the *current* generation's labour.

Take then the hypothesis of a global *degradation* due to an earlier generations' action. Here, the argument is that we should not be held responsible for actions of third persons against which there is nothing we could have done. If, as parents, we can be held responsible for our minor children's actions, it is due to the influence that can be ours on our offspring's behaviour. The same does not hold for the behaviour of people who lived well before our birth. As a result, we have two arguments, one to the effect that nothing in a Lockean approach allows for the dilapidation of *improvements* achieved by other generations, and the other to the effect that one should not expect the current generation to compensate for accumulated *degradations* due to an earlier generations' action. The third interpretation can thus be phrased as follows: *Each generation should leave to the next one at least as much as what the next generation would have, had the*

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26. See STEINER, *supra* note 16, at 258 ("[T]here can be no *moral* counterpart to the *legal* power of bequest. So the justification of bequest, if there is one, cannot lie in the demands of justice. And the property of the dead thereby joins raw natural resources in the category of initially unowned things: things to an equal portion of which, as we've seen, each person has an original right."); see also John Cunliffe, *Intergenerational Justice and Productive Resources: A Nineteenth Century Socialist Debate*, 12 HIST. OF EUR. IDEAS 227, 235 (1990) ("Those produced resources could not be legitimately transferred by individual inheritance or bequest, since any title generated by labour lapsed when the present owner died.").

*current generation not existed—or better—<sup>27</sup> had the current generation neither improved, nor degraded what it inherited.* With this third interpretation, we not only take into account improvements and degradations of the land that would have been the result of strictly *natural* phenomena, we also include the accumulated product of the activity of the generations that *preceded* the current one. This product of accumulation should neither be fully *used up* by the current generation (in case of positive accumulation), nor *compensated for* by the current generation (if earlier generations dilapidated the Earth). The three interpretations are thus:

TABLE 2: THREE LOCKEAN INTERGENERATIONAL PRINCIPLES

	$G_c$ should leave to $G_n$ at least as much (per capita) as:
Locke 1	$G_o$ originally appropriated
Locke 2	$G_n$ would dispose of, had <i>no</i> earlier generation than $G_n$ improved or degraded what it inherited
Locke 3	$G_n$ would dispose of, had $G_c$ neither improved, nor degraded what it inherited

Symbols:  $G_c$  = current generation,  $G_n$  = next generation,  $G_o$  = first generation.

We have shifted from a “prehistoric land” (what the first generation found) to a “tomorrow-counterfactual-land-in-the-absence-of-any-earlier-generation’s-modifications” baseline (what the next generation would have found in the absence of changes due to any earlier generation), and, finally, to a “tomorrow-counterfactual-land-in-the-absence-of-the-current-generation’s-modifications” baseline (what the next generation would have found if the current

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27. I am indebted to Peter Vallentyne for this improvement in the formulation of this principle.

generation were the only one not to have existed or modified anything). Contemplating the possibility of exogenous changes having taken place since prehistoric times, we abandoned the first interpretation. And considering on the one hand that the product of earlier generations' accumulation should be "naturalized" after their death, and on the other hand that the current generation should not be held responsible for previous generations' actions, we finally adopted the third interpretation.

The interesting outcome of this Lockean journey is a surprising *convergence* between the third interpretation of the equivalence proviso and the reciprocity-based substantive maxim. In both cases, but for different reasons, the current generation should do as if it had not existed. In the reciprocity-based theory, it is due to the fact that it is the only way to empty our bag of obligations resulting from what our parents gave us. In the Lockean theory, it results from the idea that doing as if one had not existed is the only way not to worsen the world that the next generation would otherwise have inherited. Thus, the expression "borrowing the earth from our children" can perfectly be read with Lockean eyes as well.

One difference with the reciprocity-based account arises, however, if Lockeans add a "per capita" clause to their equivalence proviso—as Arneson does. The Lockean principle would then advocate policies different from the reciprocity-based one, each time we have populations fluctuating from one generation to the next. To address this issue however, we would need to know more about whether Lockeanism has any implications for procreation ethics. Let us assume that the current generation can be held responsible for the size of the *next* generation's population, given its ability to decide on its own fertility rate. And let us assume that beyond a certain critical size, a bigger population is more a burden than a benefit. It all depends then on whether we can count a population increase as degradation and a population decrease as an improvement of "the (available) land." We *can* certainly defend a per capita version of Lockeanism here. But the question is whether that would be the most genuinely Lockean version. Doubts arise once we consider that we have to do *as if* the next generation were the first one or *as if* the current generation had not existed. There is a sense in which the population of the next generation could be taken as an arbitrary fact.

In such case, it would not make sense to adopt a per capita criterion.<sup>28</sup>

What we shall do now is to contrast the reciprocity-based and the Lockean maxims with egalitarian maxims in order to bring to light their distinctive features, strengths, and weaknesses. We shall begin with Rawls's views, one of the key contemporary representatives of egalitarianism as well as one of the fathers of the current debate on intergenerational justice.

#### IV. RAWLS'S TWO-STAGE APPROACH

##### *A. Adjustments in the Original Position*

What is Rawls's position on the topic? He has indeed devoted to the matter a full section of his *Theory of Justice*, addressing both procedural and substantive issues.<sup>29</sup> Let us briefly look at the procedural side. The reader will remember that in order to define and—to a certain extent—justify substantive principles of justice, Rawls relies on a hypothetical “original position under veil of ignorance.”<sup>30</sup> This means that we need to define principles that we would be ready to adopt as principles of justice while ignoring our gender, the color of our skin, the state of our physical and mental abilities, our nationality, etc. Where intergenerational justice is concerned, Rawls asks those put in the original position to decide “how much they would be willing to save at each stage of advance on the assumption that all

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28. See LEFT-LIBERTARIANISM AND ITS CRITICS: THE CONTEMPORARY DEBATE 13 (Peter Vallentyne et al. eds., 2000).

29. See THEORY OF JUSTICE (1971), *supra* note 1, 284-93. For a thorough analysis, see Clayton Hubin, *Justice and Future Generations*, 6 PHIL. & PUB. AFF. 70 (1976); Jane English, *Justice Between Generations*, 31 PHIL. STUD. 91 (1977); Routley & Routley, *supra* note 5, at 166-73; Roger Paden, *Reciprocity and Intergenerational Justice*, 10 PUB. AFF. Q. 249 (1996) [hereinafter Paden, *Reciprocity and Intergenerational Justice*]; Roger Paden, *Rawls' Just Savings Principle and the Sense of Justice*, 23 SOC. THEORY & PRAC. 27 (1997) [hereinafter Paden, *Rawls' Just Savings Principle*]; Wissenburg, *supra* note 14, at 173; Samantha Brennan & Robert Noggle, *Rawls' Neglected Childhood: Reflections on the Original Position, Stability, and the Child's Sense of Justice*, in THE IDEA OF POLITICAL LIBERALISM: ESSAYS ON RAWLS 46-72 (Clark Wolf & Victoria Davion eds., 2000).

30. See THEORY OF JUSTICE (1971), *supra* note 1, at 220.

other generations are to save at the same rates.”<sup>31</sup> What Rawls in fact asks is to define a given *rate of savings* that should be (and has been) applied intergenerationally.

For the purpose of addressing this intergenerational question, he adds two specifications. While ignoring *which* cohorts they are members of, people should assume that they are all members of the *same* cohort. Why not simply consider that they ignore which generation they are in, allowing them to be in fact members of *various* generations? Would it really stretch fantasy much further—as Rawls claims—than considering people as members of the same—but possibly remotely future—generation?<sup>32</sup> We should probably not attach too much importance then to this “present time of entry” assumption. He adds a *second* specification however. Instead of regarding people in the original position as “mutually disinterested,” he considers them as “heads of families” having a “desire to further the welfare of their nearest descendants.”<sup>33</sup> The problem that Rawls seems to aim at solving here is that in a nonideal world, *previous* generations may not have saved at a just rate. Therefore, why would a self-interested (or mutually disinterested) member of one generation bother to adopt a certain savings rate if previous generations did not do their share? In fact, Rawls subsequently abandoned this specification simply by assuming that we are in an ideal world.<sup>34</sup> In such a world, it is taken for granted that the previous generations did what they should have done, i.e. saving at the rate that they had to. Rawls’s response to the problem of intergenerational asymmetry of power (while we can influence the future, the reverse is not true) was first to adjust the motivational assumption, then to move back to ideal theory.<sup>35</sup>

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31. *Id.* at 287.

32. *See id.*; Routley & Routley, *supra* note 5, at 166.

33. THEORY OF JUSTICE (1971), *supra* note 1, at 128.

34. *See* JOHN RAWLS, POLITICAL LIBERALISM 274 (1993); *see also* English, *supra* note 29, at 98 (“Rawls says he is working within ideal theory, an account of what is right or just under the assumption that people will generally conform, or try to conform, to the principles selected.”).

35. *See* RAWLS, *supra* note 34, at 274.

### B. On Rawls's Just Savings Principle

Now, what about the *substantive* principle proposed in *A Theory of Justice*? To understand the difficulties faced by Rawls in defining a substantive theory of justice between cohorts, we need to begin with a quick look at how *utilitarians* (or more generally, *aggregative* theorists) deal with the issue.<sup>36</sup> They begin with a simple idea: Capital is productive (or at least it *can be*, once it is fruitfully invested). This means that if you delay the consumption of part of your capital to the next year (or next century, etc.), you will (or at least *may*) be able to consume much more than you would have been able to consume today out of the same amount of capital.<sup>37</sup> This also means that if you want to increase the size of the "intergenerational pie" (whatever the metrics we use to measure it: resources, utility, access to advantage, etc.), you need to require earlier generations to adopt a positive savings rate.<sup>38</sup> Admittedly, the exact rate should be defined by taking into account constraints such as the law of diminishing marginal utility. It remains, however, that whatever the exact figures, the rate of savings expected at least from earlier generations should be *positive*.

To be more precise, suppose that population and the productivity of technology remain constant. We have then three interesting hypotheses.<sup>39</sup> First, let us assume realistically that the number of generations is, if not infinite, at least indefinite. As we don't know how many generations will follow, utilitarians can be expected to advocate the adoption of a positive savings rate *indefinitely*. This

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36. For a discussion on intergenerational utilitarianism, see generally FRANK RAMSEY, *A Mathematical Theory of Savings*, in FOUNDATIONS: ESSAYS IN PHILOSOPHY, LOGIC, MATHEMATICS AND ECONOMICS (D. H. Mellor ed., 1978); BIRNBACHER, *supra* note 9, § 3.2; Luc Van Liedekerke & Luc Lauwers, *Sacrificing the Patrol: Utilitarianism, Future Generations and Infinity*, in 13 ECON. & PHIL., 159-74 (1997); Katheline Schubert, *Normativité et problèmes intergénérationnels*, in L'ÉCONOMIE NORMATIVE 231 (Hubert Brochier et al. eds., 1997); Marc Fleurbaey & Philippe Michel, *Quelques réflexions sur la croissance optimale*, 50 REVUE ÉCONOMIQUE 715-32 (1999).

37. See, e.g., KENNETH ARROW, *Rawls' Principle of Just Savings*, in COLLECTED PAPERS: SOCIAL CHOICE AND JUSTICE 133 (Belknap Press of Harv. U. Press ed., 1984).

38. But see discussion on metrics and Roemer's argument, *infra* note 100 and accompanying text.

39. See, e.g., Fleurbaey & Michel, *supra* note 36, at 717.

would then entail a never-ending sacrifice, eventually to no generation's benefit.<sup>40</sup> Second, let us stick to the same hypothesis (infinite/indefinite number of generations) while adding an extra axiom: There is some point beyond which someone's utility cannot be improved anymore (satiety or *bliss* point). If this is so, then we end up, as shown by Ramsey, with an accumulation phase followed, once satiety level is reached, by a (never-ending) steady-state stage with a zero rate of intergenerational savings, and where each generation has the same consumption and utility.<sup>41</sup> Third, once we shift to the assumption of a finite number of generations, and assuming that there is no bliss point, we would still face a sacrifice of earlier generations to the benefit of later ones. A positive savings rate would be expected from earlier generations. It would then decline to become eventually negative for the last generation. The latter could consume the whole capital.<sup>42</sup> We would make the early worst-off generations worse off than they could have been. And we would expect from them a bigger effort than from those generations who will turn out to be much better off. Thus, in the three hypotheses distinguished here, the utilitarian approach raises essential difficulties for an egalitarian.

What is then the content of Rawls's "just savings principle"? As we shall see, he ends up with a quite unexpected model, given his general commitment to maximin egalitarianism (his "difference principle"). In short, *maximin* is a principle of justice that requires us to choose the rules of social organisation such that the people who are the involuntary worst-off as a result of the implementation of these rules would be better off than the worst-off under any alternative set of rules.<sup>43</sup> It is distinct from a strict egalitarian principle in the sense

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40. Moreover, a solution based on a limitation of acceptable sacrifices to "infinitely efficacious sacrifices" faces the same objection. What difference does it make when the number of generations is infinite and when therefore any sacrifice is likely to be "infinitely efficacious"? See Marc Fleurbaey & Philippe Michel, *Quelle justice pour les retraités?*, 23 REVUE D'ÉCONOMIE FINANCIÈRE 47, 59 (1992); see also English, *supra* note 29, at 101 (arguing that "relatively small sacrifices on the part of the better off in the first generation (such as oiling the machines and recording the knowledge) will tend to improve the lot of their successors significantly").

41. See BIRNBACHER, *supra* note 9, at § 3.3.1; RAMSEY, *supra* note 36, at 152-212; Schubert, *supra* note 36, at 234.

42. See, e.g., Fleurbaey & Michel, *supra* note 36, at 721.

43. See THEORY OF JUSTICE (1971), *supra* note 1, at § 13.

that one may regard an increase in inequalities as acceptable so long as it is *necessary* for improving the situation of the worst-off. This is the case every time an increase in the social cake's size could only be made possible by a policy that simultaneously increases the inequalities in the size of the cake's shares. Maximin egalitarians will advocate such a policy whenever this increase in the social cake's global size is such that the smallest shares become bigger than the smallest shares under any alternative system of social organisation. A paradigmatic—but controversial—example is the application of a low marginal taxation rate to upper income layers.<sup>44</sup>

Now, the first characteristic of Rawls's just savings principle is that it articulates a specific goal with the means of achieving it. As he argues, "it is . . . characteristic of the contract doctrine to define a just state of society at which the entire course of accumulation aims."<sup>45</sup> Hence, just savings aims at achieving and preserving just institutions and the fair value of liberty.<sup>46</sup> Rawls's view defines a goal. It also incorporates constraints as to means of achieving this goal. As he puts it, "the just savings principle can be regarded as an understanding between generations to carry their fair share of the burden of realising and preserving a just society."<sup>47</sup> Hence, just savings is *just* both because it is oriented towards achieving just institutions *and* because each generation has to participate in the elaboration of this goal with a fair share.<sup>48</sup> We shall come back to this point.

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44. See G.A. Cohen, *Where the Action Is: On the Site of Distributive Justice*, 26 PHIL. & PUB. AFF. 3-30 (1997).

45. THEORY OF JUSTICE (1971), *supra* note 1, at 288.

46. See *id.* at 290 ("Justice does not require that early generations save so that later ones are simply more wealthy. Saving is demanded as a condition of bringing about the full realization of just institutions and the fair value of liberty."); see also Paden, *Rawls' Just Savings Principle*, *supra* note 29, at 28 (discussing Rawls's argument regarding the just savings principle).

47. THEORY OF JUSTICE (1971), *supra* note 1, at 289.

48. Paden, *Rawls' Just Savings Principle*, *supra* note 29, at 32 (stating that "so concerned is [Rawls] with the question of how this burden is to be distributed fairly between generations, that it comes to appear—perhaps even to Rawls—that the just savings principle is nothing more than a principle of just distribution"); see also Paden, *Reciprocity and Intergenerational Justice*, *supra* note 29, at 249 ("It is a principle that requires us to do our fair share to help develop today and maintain for tomorrow the conditions necessary for a just society.").



The just savings principle contains a goal/means articulation, but its even more characteristic and related feature is that it is a *two-stage* principle with an *accumulation stage* followed by a *steady-state stage*.<sup>49</sup> Were we not to require from the first generations a positive savings rate, wouldn't we be bound to remain stuck at the stage of development of prehistoric populations?<sup>50</sup> *On the one hand*, Rawls has written passages referring to a stage where each generation will have to pass on to the next one *more* than what it has received:

The process of *accumulation*, once it is begun and carried through, is to the good of all *subsequent* generations. Each passes on to the next a fair equivalent in real capital as defined by a just savings principle. . . . This equivalent is in return for what is received from previous generations that enables the later ones to enjoy a *better* life in a more just society.<sup>51</sup>

*On the other hand*, Rawls refers at some points to a "last stage," where no further *net saving* will be required: "Once just institutions are *firmly* established, the net accumulation required falls to zero. At this point a society meets its duty of justice by maintaining just institutions and preserving their material base"<sup>52</sup> or "all generations are to do their part in reaching the just state of things beyond which no further net saving is required."<sup>53</sup> These passages reveal clearly that

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49. See THEORY OF JUSTICE (1971), *supra* note 1, at 288.

50. Perhaps the *per capita* level of resources in prehistoric times was huge (given that these were relatively small populations). However, if we look at the amount of resources and opportunities that prehistoric people effectively had access to, it was quite limited. Thus, without an accumulation phase, stagnation since prehistoric times would probably have meant a life with very limited resources for most of us today.

51. THEORY OF JUSTICE (1971), *supra* note 1, at 287. Interestingly enough, Rawls uses the indirect reciprocity formula "in return to what is received" to justify the "reciprocation" of a certain savings rate. Rawls also relies on "mutual advantage" formulae such as the following one: "they will want all generations to provide some saving (excluding special circumstances), since it is our advantage if our predecessors have done their share." JOHN RAWLS, A THEORY OF JUSTICE 255 (rev. ed. 1999) [hereinafter THEORY OF JUSTICE (1999)].

52. THEORY OF JUSTICE (1971), *supra* note 1, at 287-88 (emphasis added).

53. *Id.* at 289. *But see* THEORY OF JUSTICE (1999), *supra* note 51, at 255 (providing that wealthier generations "will want all generations to provide

Rawls distinguishes an *accumulation stage* where net saving is required from each generation, from a *steady-state stage* where the savings rate can fall to zero (but not below). As soon as just institutions and their material base are put in place and maintained, no further *positive* saving is required. Rawls's two-stage principle can thus be summarized as follows:

TABLE 3: RAWLS'S TWO-STAGE PRINCIPLE OF JUST SAVINGS

Accumulation Stage	Each generation should save with the aim of achieving and maintaining just institutions and their material base, as well as taking into account the fair share of effort that each generation should bear.
Steady-State Stage	Each generation should leave to the next at least the equivalent of what it has received (from the previous generation).

## V. BEYOND RAWLS

### A. *Is an Accumulation Phase So Desperately Indefensible?*

What should we think about Rawls's two-stage principle of just savings? There are at least two types of critiques that can be raised against his theory of justice between generations. One is against the two-stage aspect, and another is against the principle applied at steady-stage. We shall first address the former challenge that consists in criticizing the two-stage nature of his model. This two-stage approach entails a *sacrifice* of the generations who find themselves in the accumulation phase, to the benefit of the next ones. Notice that the problem does *not* result so much from the fact that earlier generations will have to save at a positive rate to the benefit of the next ones who will both find themselves better off as a result *and* only need to adopt a non-dis-savings rate.<sup>54</sup> The problem is that the earlier generations may find themselves worse off than the worst-off generations under at least one alternative principle of

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some saving").

54. See THEORY OF JUSTICE (1971), *supra* note 1, at 287.

intergenerational transfers, for example, one where no positive savings would ever be required from any generation.<sup>55</sup>

However, adopting a one-stage intergenerational maximin would require a rejection of the *two* reasons why Rawls seems to have abandoned his (maximin) egalitarianism insofar as he advocates an accumulation phase followed by a steady-state stage. The *explicit* (and less robust) reason for abandoning maximin egalitarianism in the intergenerational context is that "[t]here is no way for latter generations to improve the situation of the least fortunate first generation. The principle is inapplicable and it would seem to imply, if anything, that there be no saving at all."<sup>56</sup> Since the worst-off generations are long dead and have hence become out of reach, there is no way the condition of their members could now be improved.

If the only aim of redistribution were to improve the condition of the worst-off, there would indeed be no need for savings anymore. However, as soon as we shift from strict maximin to *leximin*, this problem disappears. The idea of leximin is that if the situation of the very worst-off cannot be improved, we should then care about improving the situation of the second worst-off, etc.<sup>57</sup> For aren't there nearly as strong reasons to care for someone living in deep poverty and to care for someone else whose condition can hardly be said to be better than the one of the former person? Even if some people are (temporally or geographically) *out of access*, improving the condition of the worst-off people among those who remain accessible would already make this world a better one. We could thus meaningfully apply maximin between the generations whose condition can still be changed.

Rawls's explicit reason *for abandoning maximin* in the intergenerational context is far from robust. However, let us turn to the *implicit* reason for adopting a two-stage principle. He stresses that the obligation to accumulate ends as soon as the conditions are met for

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55. Contrast this with Rawls's view with regard to international justice where "burdened societies," instead of having to help themselves (and other societies), benefit from a duty of assistance owed to them by well-ordered societies. See JOHN RAWLS, *THE LAW OF PEOPLES* 106 (1999).

56. See THEORY OF JUSTICE (1971), *supra* note 1, at 291.

57. See AMARTYA K. SEN, *COLLECTIVE CHOICE AND SOCIAL WELFARE* 138 n.12 (1970) (defining the lexicographic maximin rule).

"bringing about the full realization of just institutions and the fair value of liberty."<sup>58</sup> This says something about the *aim* of the Rawlsian accumulation process. He insists:

It is a mistake to believe that a just and good society must wait upon a high material standard of life. What men want is meaningful work in free association with others, these associations regulating their relations to one another within a framework of just basic institutions. To achieve this state of things great wealth is not necessary. In fact, beyond some point it is more likely to be a positive hindrance, a meaningless distraction at best if not a temptation to indulgence or emptiness.<sup>59</sup>

There are then at least two ways of making sense of Rawls's accumulation stage here. The first one is closely in line with the quote above. The reader is probably aware that Rawls's theory of justice is organized around two principles. One is the principle of "equal liberty," which proposes that "each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberties for all."<sup>60</sup> This principle is lexically prior to the two-fold principle that says "social and economic inequalities are to be arranged so that they are both: (a) to the greatest benefit of the least advantaged, consistent with the just savings principle, and (b) attached to offices and positions open to all under conditions of fair equality of opportunity."<sup>61</sup> The first defense of an accumulation phase would then consist in accepting a violation of intergenerational maximin for the sake of making the satisfaction of the first—and lexically prior—Rawlsian "equal liberty" principle possible. Let us call this the "priority of equal liberty" defense of an accumulation phase.

The other way of making sense of Rawls consists in developing a *consequentialist* (maximin) egalitarian defense of an accumulation phase. What consequentialism generally says is that one may violate value *x* if it is necessary for maximizing the reign of this very value *x*

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58. THEORY OF JUSTICE (1971), *supra* note 1, at 290; see also RAWLS, *supra* note 55, at 107 n.33 (citing John Stuart Mill for this view).

59. THEORY OF JUSTICE (1971), *supra* note 1, at 290.

60. *Id.* at 302.

61. *Id.*

in society.<sup>62</sup> What is at stake is one way of addressing "intra-value" dilemmas. For example, should I be allowed to be intolerant (e.g., towards the intolerant) if it is necessary to make our society a more tolerant one? Should one be allowed to kill (e.g., a potential murderer) if this is necessary to diminish the amount of killing in our society? Should a soldier be allowed to lie (e.g., to her torturer) if this is necessary to save the lives of hundreds of honest people?

To each of these questions, a consequentialist will provide a *positive* answer, yet stress that one should always check if violating value *x* is really *necessary* for maximizing the reign of this *same* value. Let us then turn to our intergenerational situation. Admittedly, having an accumulation phase violates the (strict, maximin or leximin) egalitarian principle. A consequentialist egalitarian may, however, justify such a violation *in the name of (maximin) egalitarianism*.<sup>63</sup> Let us call this a "consequentialist (maximin) egalitarian" defense of an accumulation phase. Whereas the priority of equal liberty justification rests on the *lexical priority* of the "equal liberty" principle to justify a temporary violation of intergenerational maximin, the "maximin" defense rests on a consequentialist reading of maximin egalitarianism to justify this same temporary violation. A similar argument can be used by consequentialist egalitarians to justify egalitarian reforms in general. For any reform, any change in legislation introducing some new rights or obligations, or cancelling some old ones (e.g., having to complete a military service of one year), will inevitably advantage or disadvantage the prereform generations over the postreform generations. But such a reform, even though it necessarily violates equality between generations, may well be justified by the fact that it will overall further the egalitarian goal in the future.

Each of these two defenses (the priority of equal liberty and the consequentialist (maximin) egalitarian one) are only credible if we can successfully sustain the view that prehistoric people had a

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62. See Philip Pettit, *Non-Consequentialism and Universalizability*, 50 PHIL. Q. 175, 177-78 (2000).

63. Rawls would be a consequentialist in that sense where equal liberties are concerned since he writes: "The equal liberties can be denied only when it is necessary to change the quality of civilization so that in due course everyone can enjoy these freedoms." THEORY OF JUSTICE (1999), *supra* note 51, at 475.

miserable life *and* if we can convincingly show that there is a minimal level of wealth that needs to be reached before society becomes *able* to implement either equal liberties or maximin egalitarianism both intragenerationally and intergenerationally. For Rawlsians and—more generally—for egalitarians, the trouble with the absence of an accumulation phase would not as such be the risk of “eternity in misery” inherent in a “one-step” theory of intergenerational justice. It is the fact that such a misery would make the reign of just institutions *impossible*. In other words, under such an intergenerational scenario, misery *as such* would not be unjust. It would be unjust insofar as it offers conditions insufficient for—or incompatible with—the existence of just institutions, the satisfaction of equal liberties, and/or the reign of maximin egalitarianism.

For an egalitarian, the moral acceptability of an accumulation phase—i.e., of an early phase where positive savings is required—thus entirely rests on the validity of two *empirical* claims. As to the former one, i.e., that hunter-gatherer prehistoric societies had a life at the margins of subsistence, Sahlins has questioned this widespread view.<sup>64</sup> He argued in particular, based on contemporary data about some hunter-gatherer communities, that if we are to take as an indicator of affluence the labour-leisure ratio, the life of prehistoric populations was probably far from miserable.<sup>65</sup> This thesis has not remained undisputed however.<sup>66</sup> But even if we were *not* to give credit to Sahlins’ views, there would still be a second and more serious problem: Is it so that some minimal level of wealth is necessary for just institutions to be able to reign?

While it would admittedly be hard to draw a *necessity* link between a certain level of wealth and the existence of *just institutions*, Przeworski has recently argued in favour of a *probability* link between such wealth (as calculated by per capita income levels) and the survival of *democratic institutions* (which does not fully equate to just institutions).<sup>67</sup> Admittedly, democracy does not necessarily

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64. See MARSHALL SAHLINS, *STONE AGE ECONOMICS* ch. 1 (1972).

65. See *id.*

66. For a recent discussion, see Nurit Bird-David, *Beyond “The Original Affluent Society”: A Culturalist Reformulation*, 33 *CURRENT ANTHROPOLOGY* 25 (1992), and the comments following the article.

67. See Adam Przeworski et al., *What Makes Democracies Endure?*, 7 *J.*

entail the implementation of maximin. However, it is likely to go hand in hand with respecting basic liberties. Hence, this may come as a support of a priority of equal liberty defense of an accumulation phase. Drawing on empirical evidence, Przeworski convincingly argues that beyond a certain level of wealth, democratic institutions are more likely to endure.<sup>68</sup> Why? Imagine two political parties competing in elections, one defending the rich, the other the poor. One of the two parties will lose the elections and the question is: Why would a defeated party obey the poll's verdict instead of engaging in a struggle for dictatorship? Przeworski's view is the following:

[I]n affluent countries even the electoral losers have too much at stake to risk being defeated in a struggle over dictatorship. In poor societies, there is little to distribute, so that a party that moves against democracy and is defeated has little to lose. But in affluent societies, the gap between the well-being of electoral losers and of people oppressed by a dictatorship is large. Thus, even if the income a particular group expects when it rebels is higher than the income it expects under democracy, the possibility of losing the struggle over dictatorship is foreboding in affluent societies. As per capita income increases, the dictatorial lottery becomes more uncertain relative to the democratic lottery.<sup>69</sup>

In other words, under Przeworski's theory, the more a society is affluent, the more the gap will increase between being a loser in the democratic game and being a loser in the struggle for dictatorship. If we are ready to draw a connection between democracy and equal liberties (or to use the same argument for just institutions as the one Przeworski uses for democracy), then we have a good "priority of equal liberties" case for an accumulation phase, which contrasts with the consequentialist (maximin) egalitarian case that does not seem to have much support.<sup>70</sup>

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DEMOCRACY, Jan. 1996, at 39.

68. *See id.* at 39-55; *see also* Adam Przeworski, *Democracy as an Equilibrium* (Mar. 29, 2001) (unpublished manuscript, on file with the author).

69. *See* Przeworski, *supra* note 68, at 11.

70. A further alternative would consist in claiming that we can have accumulation processes where even the first generation would not lose anything compared with a zero rate of intergenerational savings. This would then be

Now, before turning to our critique of Rawls's principles at steady-state stage, we need to address a practical question. Assuming we adopt the Rawlsian theory, can we regard ourselves as being already in the steady-state stage? This is relevant to the question of whether eternity in misery is still a *real* problem for humankind today. One may indeed claim that *even if* we were unable to properly justify the need for an accumulation phase (*quod non*), it should not worry us too much anyway. For we may have already reached the steady-state stage and there is nothing we can do about the situation of prehistoric humans. Either, we can go as far as Rawls does and conjecture that "there is no society anywhere in the world—except for marginal cases—with resources so scarce that it could not, were it reasonably and rationally organized and governed, become well-ordered."<sup>71</sup> If we are not ready to go down this line, we should then envisage all the possible domestic and international distributive strategies available to operate effective intragenerational redistribution. Studies show that at least eradicating world hunger is clearly an option.<sup>72</sup> This being done, we could then decide if further savings are still needed.<sup>73</sup>

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compatible, if not with strict egalitarianism, at least with maximin egalitarianism. Clark Wolf has recently argued for the possibility of such intertemporal Paretian improvements. Further research is needed, however, both to ascertain the strength of the underlying intuition and to identify the precise circumstances—if any—under which such an avenue could be of practical significance. See Clark Wolf, *Intergenerational Justice and Just Savings*, in VALUES, JUSTICE AND ECONOMICS (G. Gaus et al. eds.) (forthcoming 2002). But see Laurence J. Kotlikoff, *Justice and Generational Accounting*, in JUSTICE ACROSS GENERATIONS: WHAT DOES IT MEAN? 77 (L. Cohen ed., 1993) (assuming the "zero sum nature of generational policy"); Brian Barry, *Sustainability and Intergenerational Justice*, in FAIRNESS AND FUTURITY: ESSAYS ON ENVIRONMENTAL SUSTAINABILITY AND SOCIAL JUSTICE 93, 99 (Andrew Dobson ed., 1999) ("It could be that there are intertemporally Paretian improvements to be made in comparison with the baseline constituted by the outcomes of the other principles working together. However, I think it quite implausible that there are.").

71. See RAWLS, *supra* note 55, at 108 n.34 (Rawls adds: "Arctic Eskimos, for example, are rare enough, and need not affect our general approach. I assume their problems could be handled in an ad hoc way.").

72. See Thomas Pogge, *Priorities of Global Justice*, in 32 METAPHILOSOPHY 6, 11 (2001).

73. Current international inequalities should thus be reduced as much as possible intragenerationally (through international transfers) instead of relying on intergenerational development policies. Cf. BRIAN BARRY, *The Ethics of*



B. *Prohibiting Both Dis-Savings and Savings at Steady-State Stage*

"Being in favour of future generations is somehow more antiseptically apolitical than being in favour of one's contemporaries, and also, in an odd way, gives an impression of being more high-minded."<sup>74</sup>

One thing is to challenge the legitimacy of an accumulation phase. We have seen above that egalitarian justifications of an accumulation phase cannot be totally excluded and that the priority of equal liberty is a serious candidate. And if we need an accumulation phase, Rawls's principle of *progressive* savings applied to that stage is a fine one. There is, however, another problem with Rawls's just savings principle. Insofar as it applies to the steady-state phase, it is an insufficient one. Or at least this is what I shall now argue.

Egalitarians should not only stick to a "non-dis-savings" rule at steady-state stage. They should also *prohibit positive savings*. For Rawls's prohibition of *dis-savings* does not necessarily prohibit *savings*.<sup>75</sup> What matters to him is that we leave enough to the next generation. I shall argue that we should equally worry about not leaving them *too much*, and that this is a matter of *justice*. Rawls himself insists, as we have seen that great abundance may be "too much" insofar as it would affect negatively the meaning of our lives.<sup>76</sup> He does not say however that it can be "too much" *as a matter of justice*. My claim is that maximin egalitarianism itself requires that in steady-state we should *in principle* leave neither less, *nor more* to the next

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*Resource Depletion*, in 2 LIBERTY AND JUSTICE, *supra* note 8, at 259, 271 (arguing that international redistribution should help the poorest countries meet their *intergenerational* targets).

74. *Id.* at 268.

75. See THEORY OF JUSTICE (1971), *supra* note 1, at 298; see also RAWLS, *supra* note 55, at 107 (stating that "[a]ccordingly, savings may stop once just (or decent) basic institutions have been established . . . a society may, of course, continue to save after this point, but it is no longer a duty of justice to do so.") (emphasis added).

76. Rawls writes, "In fact, beyond some point it is more likely to be a positive hindrance, a meaningless distraction at best if not a temptation to indulgence or emptiness." THEORY OF JUSTICE (1971), *supra* note 1, at 290; see also RAWLS, *supra* note 55, at 107 n.33 (stating that "[t]he art of living" is more important than "the art of getting on").

generation than what was left to us by the previous one.<sup>77</sup> This is a somehow unexpected claim, for many of us feel it is only natural to sacrifice some of our welfare to the benefit of our children. How many generations haven't sacrificed themselves for their descendants? Can there be anything unjust in such altruistic behaviour? The (maximin) egalitarian answer is "yes"—and to that extent it differs clearly from the reciprocity-based and the Lockean accounts.<sup>78</sup> For we should be concerned not only with the worst-off generations, but also—and more centrally—with the worst-off people trans-generationally, i.e., whatever the generation they are in. It includes as well a concern for those who are the worst-off in the *present* generation. And this is where the idea of prohibition of savings comes from. We have to assume an ideal world in which each generation applies maximin egalitarian rules *intragenerationally*. Therefore, we need at steady-state stage a rule that is such that the situation of the worst-off in each generation will be better than under any alternative rule. Prohibiting both dis-savings and savings appears to satisfy such a requirement. Thus, the core idea is the following: If there are "surpluses," they should be given in priority to the worst-off in the current generation, instead of being transferred to the next generation. For, assuming that each generation applies maximin intragenerationally, and sticking strictly to a zero rate of savings, the worst-off people in the next generation will still be better off than the worst-off among the current generation *would have been*, had we adopted a positive savings rate.

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77. Cf. R.M. Solow, *Intergenerational Equity and Exhaustible Resources*, REV. ECON. STUD. 29, 30 (1974) (arguing that "the max-min principle requires that consumption per head be constant through time. If consumption per head were higher for a later than for an earlier generation, then social welfare would be increased if the early generation were to save and invest less, or to consume capital, so as to increase its own consumption at the expense of the later generation. If consumption per head were higher for an earlier than for a later generation, then social welfare would be increased if the early generation were to consume less and, correspondingly, save and invest more, so as to permit higher consumption in the future"); Fleurbaey & Michel, *supra* note 36, at 723; Fleurbaey & Michel, *supra* note 40, at 57.

78. Cf. THEORY OF JUSTICE (1999), *supra* note 51 at 255 ("The just savings principle applies to what a society is to save as a matter of justice. If its members wish to save for other purposes, that is another matter.").

Take the debate on taxation of bequests. There are at least two types of egalitarian concerns at stake.<sup>79</sup> First, there is no reason why a member of the next generation should begin his life with much more money than another member of his generation, simply because he happens to have rich parents. Suppose now that the members of the next generation all begin their life with the same set of internal and external resources. An egalitarian would still have a *second* type of objection: Is it acceptable that the next generation would begin its life with a bigger basket than the one we began our life with? The former egalitarian worry was: "Should I not bequeath my belongings to the poorest members of the *next* generation instead of to my own children?" The latter egalitarian concern is instead whether "I should donate my belongings to the poorest members of *my* generation, instead of bequeathing them to my children."

It is now clear that *this* argument against positive savings has nothing to do with conservatism, with the alleged inevitability of generational self-interest, with the fear of spoiling our children, or with a critique of never-ending growth as unsustainable, absurd (not conducive to more happiness) or generally harmful (jeopardizing the meaning of our lives). What is at stake here is a concern for the worst-off, whatever the generation they are in, including the current one. And the radicality of such a "zero rate" principle cannot be overestimated. For it prohibits any further economic development beyond the accumulation phase. However, there are exceptions. And we shall now turn to their examination.

### C. *Six Exceptions to the "Zero Rate" Principle*

#### 1. Violation of (maximin) egalitarianism within the present generation

We have assumed earlier that each generation was adopting (maximin) egalitarianism intragenerationally. This is how a link can be made between not transferring our surplus to the next generation and benefiting the worst-off among the people of our own generation. What happens however in a (nonideal) case where our

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79. See BRUCE A. ACKERMAN, SOCIAL JUSTICE IN THE LIBERAL STATE 205 n.5 (1980).

generation would not be ready to adopt (maximin) egalitarian rules intragenerationally? The answer will vary. Egalitarians should then promote the principles that—in this generation and given what is regarded as politically feasible—would better promote the interests of the worst-off transgenerationally. Political feasibility is an empirical matter. But there is an important remark to be added here. Theories of justice may tend to define what we owe to the next generation as a package or aggregate. And we shall come back to the metrics issue (a package of what?).<sup>80</sup> However, it is often overlooked that the distribution of these goods within the current generation will clearly affect their distribution in the next generation. This means that not only what we *teach* our children, but also the current distribution (i.e., how we *act*) can affect the situation of the worst-off in the next generation. After all, the condition of my parents (i.e., their financial resources, their nationality, etc.), compared with the one of my neighbor's parents is a major determinant of how I shall fare over my whole life and of my ways of looking at the requirements of justice.<sup>81</sup> In other words, implementing maximin egalitarianism within our own generation is no doubt one of the best ways of heading towards the best possible condition of the worst-off people in the next generation, i.e., of making sure that (maximin) egalitarianism will be applied intragenerationally by the next generation and—hopefully—*transgenerationally*.<sup>82</sup> Notice finally that the other exceptions below may require a departure from our strict “zero rate” rule, even in a world where each generation would apply (maximin) egalitarianism intragenerationally.

## 2. Unanimity on positive savings

Were we to imagine that each generation had only one member, and that each of them were willing to adopt a positive savings rate, there would indeed be nothing wrong with positive savings. And it is in that sense that there is something perfectly acceptable in the willingness of people to save for their children. However, as soon as

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80. See discussion *infra* PART VII.

81. See, e.g., Samuel Bowles & Herbert Gintis, *Intergenerational Inequality*, J. ECON. PERSP. (forthcoming 2001) available at <http://www-unix.oit.umass.edu/~gintis/>.

82. See Barry, *supra* note 70, at 112-13.

each generation contains more than one person, the issue of voluntariness surfaces. Saving for your children is fine as long as you don't do it at the cost of the worst-off people of your generation who would rather appreciate your help.<sup>83</sup>

### 3. Uncertainty and (nonexcessive) prudence

There is also the practical problem of uncertainties, because working with large populations and future generations clearly entails that there are huge uncertainties involved. This might require some prudence and therefore some extent of *positive* savings.<sup>84</sup> It can, however, not be overstressed that excessive prudence operates at the cost of the current generation's worst-off people. Risks of insufficient as well as *excessive* prudence are equally worrying. Moreover, the existence of an overlap between generations implies the possibility of backwards readjustments if reality turns out not to fit at all with the expectations. While it is clear that uncertainty constitutes in practice a tremendously important issue, there might not be much to be said about it from a philosophical point of view.<sup>85</sup>

### 4. The "exogenous disadvantage" hypothesis

Suppose now (counterfactually) that we dispose of full information about both what we leave to the next generation and what will happen to them. The case of exogenous changes needs to be considered again.<sup>86</sup> For it will also help us grasp another key difference between a (maximin) egalitarian approach and reciprocity-based or Lockean approach. Let us thus begin with the "predictable exogenous disadvantage" example. Imagine the earth with a small human population having no influence on climatic phenomena. Such people would, however, dispose of climatological knowledge such that they

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83. See THEORY OF JUSTICE (1999), *supra* note 51, at 131 (explaining Rawls's idea of a "veto of the worst-off"); see also discussion *infra* Part IV (discussing five of the possible principles of intergenerational justice).

84. See, e.g., PHILIPPE VAN PARIJS, *REFONDER LA SOLIDARITÉ* 74-75 (1996).

85. See, e.g., BIRNBACHER, *supra* note 9, pt. 4 (discussing intergenerational justice and uncertainty). See generally Sven Ove Hansson, *What is Philosophy of Risk?*, 62 THEORIA 169 (1996) (discussing risk and uncertainty based on insights and results from epistemology, decision theory, and moral philosophy).

86. See also discussion *supra* Part III.

can anticipate with certainty that, in fifty years, a major climatic perturbation resulting from the fall of a meteorite will considerably affect the level of resources of the next generation (amounting to a natural form of "time bomb"). Or suppose alternatively that given the conjunction of several factors unrelated to human activity, including variations in the geometry of the Earth's orbit around the sun, a glaciation can be expected to take place within the next century or so.<sup>87</sup> The consecutive disadvantage will be "exogenous" because the current generation would neither have caused it, nor be able to do anything against it. Clearly, justice as reciprocity would be unable, in the predictable exogenous disadvantage case, to justify obligations incumbent on the current generation *beyond* the satisfaction of a "non-dis-savings" rate. The same holds for Lockean.

This contrasts with what egalitarians should advocate. Let us take an analogy. If I am physically handicapped due to no fault of my own, commutative (reciprocity-based) justice is only helpful if such handicap was caused by someone else. Were it merely the fruit of nature, only a *distributive* theory could justify that compensation for such disadvantage given to me by the rest of society, despite its absence of responsibility for it. Similarly, in the intergenerational circumstance of predictable exogenous disadvantage falling on the next generation, we should depart both from a mere non-dis-savings rule and from a prohibition of savings. We should indeed require, *ceteris paribus*, the adoption by the current generation of a *positive rate of savings* such that the next generation will not find itself more disadvantaged than the current one. As a result of such extra effort, we may find ourselves in a situation worse than the previous generation's, with the aim of preventing the next generation from being worse off than we are. Justice as reciprocity would be incapable of justifying such an obligation. Notice, moreover, that the reverse will be true if there is a predictable exogenous advantage to the benefit of

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87. On Milankovitch's theory connecting variations in the earth's motion (eccentricity, obliquity, and precession) and long-term climate change, see M. MILANKOVITCH, *CANON OF INSOLATION AND THE ICE-AGE PROBLEM* (1941). For a discussion of Milankovitch's theory, see MILANKOVITCH AND CLIMATE: *UNDERSTANDING THE RESPONSE TO ASTRONOMICAL FORCING* (NATO ASI Series C: Mathematical and Physical Sciences, pts. I & II) (A. Berger et al. eds., 1984). Another good example would be predictable earthquakes.

the next generation or a disadvantage falling on the current generation that can be expected not to repeat itself for the next generation. In such a case, some level of *dis-savings* may be allowed and even required (for the sake of current generations).

The "exogenous disadvantage" hypothesis helps us in understanding one possible reason *why* many people tend to approach intergenerational justice in terms of commutative justice even though they would not tend to approach other comparable issues of justice in such terms. My hypothesis can be best introduced by an analogy with intragenerational justice. We can broadly identify three causes of handicaps: nature (e.g., being born blind without anybody having been able to do anything about it), other people (e.g., being made blind by someone else's action) and oneself (e.g., making oneself blind). Imagine that nature/luck would be such that it would not cause any more handicaps. There would only be two possible causes of handicaps left and no more room for egalitarian distributive justice. For either we should bear the consequences of our free choices (making oneself blind), or other people should compensate the harms that they made us suffer (making someone else blind). Egalitarians typically limit the realm of redistribution to compensating for involuntary disadvantages.

Now, if we go back to the intergenerational domain, were we to consider that what the next generations dispose of results either from what we left them, or from what they freely chose to do with it, there would be no room left for intergenerational distributive justice. It is only when we envisage the possibility of exogenous disadvantage in the intergenerational realm that genuine *distributive* justice is made relevant. Thus, the reason why we tend to deal with the intergenerational field in commutative terms is probably due in part to the way we consider the nature of intergenerational transfers, overlooking the possibility of "exogenous transfers." Not only does the current generation transfer resources to the next, nature can also "independently" affect the level of resources transferred.

### 5. Demographic fluctuations

There is still another reason why (maximin) egalitarians may have to depart from a prohibition on both savings and dis-savings. For egalitarians clearly need to base themselves on a *per capita*

criterion when dealing with different countries or generations.<sup>88</sup> Once we do that, however, it is clear that if the population of the next generation can be expected to be bigger than the one of the current generation, a positive savings rate may be required so as to guarantee that the members of the next generation have in principle as much as we received.<sup>89</sup> This leaves open the question as to whether all the members of such a "rabbit" generation should equally participate in this savings effort.<sup>90</sup> And if instead, a demographic decline can be expected, some level of dis-savings may be allowed and even required.<sup>91</sup> Again, such positions derive from a concern for the

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88. In discussions with Louis Gevers, he put to me the following "parental" objection to the "per capita" approach. Although I believe that getting rid of the "per capita" proviso would lead to absurd results for an egalitarian, I must admit that the objection is a tough one. It works as follows: consider a couple of parents facing a choice between having two or four children. What they are asking themselves is whether if they decide to have four children, they should work twice as hard in order to make sure that what each of their four children would receive from them would be as much as each of their two children would receive in case they decide to have only two. Those who are skeptical about the "per capita" proviso will claim that equality should not be a concern here. One way out may consist in showing that what matters is "parent-child" equality as opposed to "actual child-alternative child(ren)" equality.

89. *Contra* ERIC RAKOWSKI, EQUAL JUSTICE 152-53 (1991) ("[I]f the population were increasing, then it appears that members of each successive generation would have to settle for smaller shares than their forebears received, *since it seems unfair to require someone to hand over more, or much more, than he was given.*") (emphasis added). Rakowski's view, obviously marked by the reciprocity-based approach, overlooks the fact that, given the wide availability of contraceptive means, we should be held responsible to a large extent for demographic increases, at least to the extent that they would be due to increases in fertility rates.

90. *See id.* at 153; *see also* Paula Casal & Andrew Williams, *Rights, Equality and Procreation*, in 17 ANALYSE & KRITIK 93-116 (1995).

91. Rakowski adds that:

Justice requires . . . that the two generations split the difference: each of the first generation's members would have to pass on an amount that differed from the higher sum he initially received by as much as the sum that each of the second generation's members received exceeded the sum that the first generation's members initially received. Or, since that formula fails to take account of the interests of members of the third and later generations, perhaps part of the difference that the first two generations would otherwise split should be set aside and invested for later generations.

Rakowski, *supra* note 89, at 152.



worst-off people transgenerationally (therefore in our own generation as well). Once we remember this rationale of the prohibition of savings, the possibility of requiring a positive savings rate in case of population growth raises another issue of procreative ethics. In effect, it is one thing to say that if a generation decides to have more than, say, two kids on average, it should adopt a positive intergenerational savings rate.<sup>92</sup> It is another however to ask whether, in the first place, we should not take care in priority of existing people who suffer instead of letting our population grow, be it by regarding procreation morally defensible only when no adoption is needed anymore,<sup>93</sup> or when some level of resources has been reached for all existing people. Thus, on the one hand we can say: "if the current generation produces more people, it should bear the associated costs." On the other hand, we can ask: "is it morally entitled to generate such additional costs in the first place?"

At this point, intergenerational justice meets population ethics and it is beyond the scope of this article to address the difficulties it raises.<sup>94</sup> What matters to us primarily here are two issues. First, whether population growth or decline affects the rate of savings expected from the current generation. If so, demographic policy should therefore be regarded as a core element in the implementation of intergenerational justice. Second, we observe still another difference with the reciprocity-based account since for the latter, whether or not

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92. See also the intragenerational issue as to whether parents who decide to have more than, say, two children should bear themselves the costs involved in what may be regarded as an expensive taste. Moreover, it may well be that "locally," having less than two children be considered an expensive taste, e.g., in cases where the sustainability of pay-as-you-go pension schemes requires a sufficient amount of future workers.

93. See Christian Munthe, *The Argument from Transfer*, 10 *BIOETHICS* 27-42 (1996).

94. For more on population and procreation ethics, see generally Casal & Williams, *supra* note 90, arguing that justice does not require subsidising parents who produce a public good, yet one may tax them if they threaten to produce a public bad. See also, *CONTINGENT FUTURE PERSONS: ON THE ETHICS OF DECIDING WHO WILL LIVE, OR NOT, IN THE FUTURE* (Nick Fotion & Jan C. Heller eds., 1997); PARFIT, *supra* note 3, at ch. 17-19; *PREFERENCES* 367 et seq. (Christoph Fehige & Ulla Wessels eds., 1998); GUSTAF ARRHENIUS, *FUTURE GENERATIONS: A CHALLENGE FOR MORAL THEORY* (2000) (unpublished Ph.D. dissertation, Uppsala University) (on file with author).

the next generation is bigger than ours should not matter. Our obligation to reciprocate is simply affected by what we received initially, not by the amount of future people who will benefit from it.

6. Does it make any difference to be a strict or a maximin egalitarian?

We have seen that the steady-state principle following from (maximin) egalitarianism differs significantly from Rawls's principle of non-dis-savings. Here we have a possible sixth exception to the "zero rate" principle that provides as well an opportunity to examine whether it makes a difference to be a strict or maximin egalitarian in such a steady-state intergenerational context. We already mentioned the fundamental difference between strict and maximin egalitarianism. The former is centrally concerned with reducing inequalities between people while the latter is primarily concerned with improving the situation of the worst-off people in society. This core difference in approaches only leads to practical divergences in cases where larger inequalities can be regarded as *necessary* to the improvement of the situation of the worst-off—typically through efficiency gains. Can we find examples of such a necessity in the intergenerational context, and do departures from the zero rate principle follow?

There are at least two examples, beyond the case of Paretian improvements discussed earlier.<sup>95</sup> First, let us imagine that because of an anticipatable exogenous factor, the next generation may be expected to be worse off than the current one. A positive savings rate is thus required.<sup>96</sup> One way of doing so consists in financing a compensatory savings fund, such that the two generations can be expected to end up as well off as each other (strict egalitarian solution). Another option consists in injecting this money into the economy in a way that would increase the current generation's level. The productivity gain may then be such that the benefits to the next generation could turn out to be higher than in the case of a fund, while at the same time the inequality between the current and the next generation would be increased. However, it is unclear from this example why such inequalities are *necessary*. For even the gains obtained

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95. See Wolf, *supra* note 70.

96. This first example was suggested to me by Philippe Van Parijs.

from investing the money in the current economy (instead of putting it aside) could perfectly as well eventually be distributed between the current and the next generation on egalitarian grounds. Investing the money in the current economy is not necessarily equivalent to seeing the current generation adopting a higher *consumption* level. Moreover, if each generation operates in the same way, it is unclear that any inequalities in starting points will necessarily follow. This first example can thus be dismissed.

Second, let us now imagine that it is the *previous* generation that is expected to be disadvantaged and that we are managing a pay-as-you-go pension scheme. Either, we adopt a taxation rate such that the level of access to advantage of each of the two cohorts over their complete life would be equal (strict egalitarian solution). Or, taking into account the dynamic effects of taxation on the current and active generation, it may be that a lesser taxation rate may increase their productivity. The increase in the taxable mass could more than compensate the lowering of the taxation rate. The size of the cake to be distributed between pensioners and the (potentially) active population would increase to such an extent that the former would find themselves in a better position than with the strict egalitarian solution. Of course, an increase in intergenerational inequalities would follow. But this should not stop maximin egalitarians. And here we indeed have a plausible example relying on the "argument from incentives." However, it is only a *local* one. Whether the same differences would subsist once we would look at the full productive potential left by one generation to the next is less clear.

Therefore, whether it makes a difference to be a strict or a maximin egalitarian remains an open question. It will depend to a large extent on whether inequalities grounded on the argument from incentives will not be compensated in the comprehensive accountability that intergenerational justice is requiring from us. More importantly, even if we were to find examples where strict and maximin egalitarian approaches could differ, my view is that in such cases, the prohibition on positive savings (to the benefit of the currently worst-off) should stand and would therefore erase any difference that could occur.

## VI. A BRIEF RECAPITULATION

TABLE 4: FIVE POSSIBLE PRINCIPLES OF INTERGENERATIONAL JUSTICE

<i>Underlying theory</i>	<i>G<sub>c</sub> should leave to G<sub>n</sub>:</i>	
<i>Ramsey (steady-state)</i>	neither less, nor more (per capita) than what	had been left to G <sub>c</sub> by G <sub>p</sub>
<i>Lockean</i>	at least as much (per capita?) as	G <sub>n</sub> would have, had G <sub>c</sub> neither improved, nor degraded . . .
<i>Reciprocity-based</i>	at least as much as	had been left to G <sub>c</sub> by G <sub>p</sub>
<i>Rawls (steady-state)</i>	at least as much (per capita) as	had been left to G <sub>c</sub> by G <sub>p</sub>
<i>(Strict/Maximin) Egalitarian</i>	neither less, nor more (per capita) than what	had been left to G <sub>c</sub> by G <sub>p</sub> , <i>with exceptions</i>

Symbols: G<sub>c</sub> = current generation, G<sub>n</sub> = next generation, G<sub>p</sub> = previous generation, G<sub>0</sub> = first generation.

Having explored several possible principles of intergenerational justice,<sup>97</sup> we do now dispose of enough material for some

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97. There are, of course, other possible principles:

On intergenerational communitarianism, see DE-SHALIT, *supra* note 5, at 13-65; Edward Page, *Intergenerational Justice and Climate Change*, 47 POL. STUD. 53 (1999) (developing a group-centered view to address the non-identity challenge).

On intergenerational sufficientarianism, see WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, OUR COMMON FUTURE 8 (1987) stating that "[h]umanity has the ability to make development sustainable – to ensure that it meets the *needs* of the present without compromising the ability of future generations to meet their own *needs*" (emphasis added), Wilfred Beckerman, *Sustainable Development and our Obligations to Future Generations*, in FAIRNESS AND FUTURITY: ESSAYS ON ENVIRONMENTAL SUSTAINABILITY AND SOCIAL JUSTICE 71, 84 (Andrew Dobson ed., 1999), and Wissenburg, *supra* note 14, at 192 (discussing the "Pareto-minimum rule.").

On intergenerational mutual advantage theories, see DAVID GAUTHIER, MORALS BY AGREEMENT 298 (1986), Fleurbaey & Michel, *supra* note 40, at 51-54, Kevin Sauvé, *Gauthier, Property Rights, and Future Generations*, 25 CANADIAN J. PHIL. 163 (1995), Joseph Heath, *Intergenerational Cooperation*

cross-sectional analysis. There are several aspects to be stressed upon. First, it is now clear that there are significant differences between a commutative (reciprocity-based) and a distributive (egalitarian) approach of intergenerational justice. Besides the difficulties intrinsic in the reciprocity-based approach in the intergenerational context, and the fact that fundamentally different logics are at work in these two theories, practical differences occur. The reciprocity-based account does not adopt a *per capita* approach. It is unable to justify a principle of prohibition of positive savings. It remains indifferent to exogenous disadvantages that would affect the next generation. And we have also seen that the Lockean principle (Locke 3) operates the same way as the reciprocity-based one, with the possible exception of its per capita component.

Second, one parallel between the utilitarian and egalitarian principles is that they are clearly per capita, while at least the reciprocity-based one is clearly not. But we have seen that an articulation with population and procreation ethics is needed before we are able to draw the proper conclusion from such a per capita feature. In other words, to what extent can utilitarians or egalitarians say anything meaningful about what size the next generation's population *should* be? Another parallel, at least between Ramsey's utilitarianism and egalitarian approaches, is the two-stage nature of such principles. While a utilitarian will not have any problems in justifying an accumulation phase, we have seen that, unless there is some bliss point, such a phase may well never end. Egalitarians face the reverse challenge. For them, the most difficult bit consists in justifying an accumulation phase. We have indicated that there is at least one promising avenue in that respect, the priority of equal liberty one.

One further parallel between Ramsey's approach and egalitarianism is that they are both capable of justifying a *prohibition on positive savings*. However, once we abandon Ramsey's view, to adopt a utilitarianism with an indefinite horizon and without a "bliss" assumption, the parallel with egalitarianism vanishes—with the

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and *Distributive Justice*, 27 CANADIAN J. PHIL. 361 (1997), Hans-Peter Weikard, *Contractarian Approaches to Intergenerational Justice*, 84 ARCHIV FÜR RECHTS-UND SOZIALPHILOSOPHIE 383-91 (1998), and Gustaf Arrhenius, *Mutual Advantage Contractarianism and Future Generations*, 65 THEORIA 25 (1999) (criticizing Heath's attempt).

possible exception of the per capita assumption. Accumulation can then be expected to last forever.

Thus, we hope to have shown convincingly three things. First, the egalitarian principle has implications that are clearly distinct from the other principles discussed, i.e., the reciprocity-based, Lockean, and utilitarian principles. Second, justifying the need for an accumulation phase from an egalitarian perspective is a real option. Third, Rawls's proposed principle for steady-state, i.e., his non-dis-savings rule, should be replaced with a "zero rate" principle. Having completed our theoretical examination of principles of inter-generational justice, it is time for us to have a closer exploratory look at two more "practical" sets of issues.

## VII. EQUIVALENCE AND SUBSTITUTABILITY

### A. *What Are Equivalent Baskets of Resources and Talents?* *The Metrics Issue*

So far, we have focused on the *profile of savings* that was advocated by different principles of justice. What criteria should we use, however, to assess whether a generation has left less, as much, or more than what it received itself? This is what egalitarians usually refer to as the "metrics" question (*Equality of what?*). A whole range of metrics has been proposed extending from the objectivist notion of "resources" to the subjectivist one of "welfare."<sup>98</sup> In between, there is a whole range of intermediary notions such as equal access to advantage (Cohen), equality of capabilities (Sen), equality of opportunity for welfare (Arneson), equality of material potential of welfare (Barry).<sup>99</sup> What is the problem that these various metrics are trying to address? Egalitarians are seeking a metrics that would be able to separate differences between people that result from brute bad luck (for which compensation is due) and those that result from people's free choices (the costs of which are our own responsibility).

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98. For an introduction to the metrics issue see JOHN E. ROEMER, *THEORIES OF DISTRIBUTIVE JUSTICE* 237-315 (1996).

99. See BRIAN BARRY, *Justice between Generations*, in 2 *LIBERTY AND JUSTICE*, *supra* note 8, at 242-58; VAN PARIJS, *supra* note 84, at 73.

Roemer has recently revived an interesting issue that provides us with an ideal focal point to discuss the metrics issue in the intergenerational context. The idea is that once we adopt an (maximin) egalitarian *welfarist* metrics, adopting a positive savings rate may increase *both* the next *and* the current generations' welfare. This results from the *psychological* assumption that a parent's happiness can clearly be affected by his or her children's level of welfare.<sup>100</sup> Were we to all be parents and be similarly moved by such psychological motives, there would be nothing wrong in unanimously deciding to adopt such a rate of savings (for what "resources" or "productive potential" are concerned). Furthermore, what Arrow and Roemer say is that this may even increase the welfare of (those who are parents in) the *current* generation.

I can see at least three difficulties with Roemer's idea. First, such an argument only works if we apply the notion of "positive savings" to resources (or productive potential, etc.), not to welfare as such. Then, we have an ambiguous statement according to which "once we adopt a positive savings rate for *x* (resources), hence potentially reducing the *y* (welfare) of the current generation, we may in fact end up increasing the level of *y* of both the next and the current generations." The difficulty in analysing such reasoning comes from the simultaneous use of *two metrics*. This is how the parent's generation can gain from its *own* sacrifice—hence, they would not be sacrificing themselves in the relevant sense: by relatively impoverishing themselves (in resources), parents may well be enriching themselves (in welfare).<sup>101</sup> This may well increase the size of the intergenerational (welfarist) cake, not necessarily at the cost of an increase in (welfare) involuntary inequalities. But if it does entail an increase in welfare inequalities between the current generation and the next one, we would thus have a third example of a divergence between strict and maximin egalitarianism. Thus, if the psychological assumption above effectively affects the welfare of parents to a large extent, and once we assume that some form of welfarist metrics can

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100. See John E. Roemer, "What we owe our children, they their children, and . . . .", (June 16, 1999) (working paper), at <http://www.econ.ucdavis.edu/workingpapers/workingpaperpdf/99-09.pdf>; see also ARROW, *supra* note 37, at 134.

101. Cf. Wolf, *supra* note 70.

be defended, the adoption of a positive savings rate for what resources are concerned can effectively increase the opportunities for welfare of the worst-off transgenerationally. Admittedly, the worst-off in the present generation may not be parents themselves, and hence may not benefit directly from the effects of the psychological mechanisms. But what is gained from parents can benefit, through other forms (financial or others), the worst-off in the same generation who would not be parents themselves.<sup>102</sup>

The second difficulty with Roemer's view is that its practical significance should not be overstated, because it depends on the relative importance of this "next-generation-oriented" psychological assumption. How does it weigh against the well-being gained by helping people other than our children (e.g., friends, grandparents or parents)? Moreover, the approach advocated by Roemer is fine only under the condition that the worst-off in our generation would also exhibit the same degree of next-generation-oriented-altruism as the rest of the population. If it were not the case, then the unanimity proviso discussed above would resurface.<sup>103</sup> The worst-off today could legitimately ask: "why not direct such generosity towards those who are worst-off today, instead of members of the next generation?"

Finally, there is a third fundamental problem with Roemer's approach. One question about the "welfare" metrics is, for example, whether we should equally care about the satisfaction of aggressive and inoffensive tastes. Furthermore, should society provide satisfaction to the same extent in preference for a second-hand bicycle or for a Ferrari? We may well move towards a more *objectivist* metrics, typically "resources." Admittedly, were we to be able to equate "resources" with "circumstances," equalizing resources would do the job since any remaining inequalities could be said to result from people's free choice and hence would not require any compensation. The problem is that equalizing resources at the start is not always possible. Therefore, to compensate for remaining differences in

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102. Interestingly enough, Rawls's adjusted motivational assumption resurfaces with a slightly different function. Even in an ideal world, it remains useful for showing why a *positive* savings rate (at least applied to a metrics other than welfare) might entail gains to the "sacrificing generation" itself.

103. See discussion *supra* Part V, section C, subsection 2.



external resources and talents, we need some account of the value of a given resource or talent, of what it represents for the people at stake. Hence, don't we necessarily need to fall back to a subjectivist dimension where resources only matter to the extent of what they do to people, be it phrased in terms of welfare or otherwise?

Now, sophisticated procedures have been proposed, for example by Dworkin who relies on a mix of hypothetical auction and insurance schemes to compare heterogeneous baskets of external and internal resources, in order to assess the extent to which they are equivalent or not.<sup>104</sup> What are the implications of such a type of *equivalence* assessment in the intergenerational context? It is important to see that the problem of heterogeneity and the consecutive need for equivalence assessment is not limited to the intergenerational sphere. There is, however, a specific *source* of heterogeneity through time—the exhaustibility of some types of resources. Now, how do we decide how much technology needs to be transferred to the next generation to make up for the depletion of oil reserves? How do we make sure that what we leave them is as much as what we received, even though the content of the basket that we are transferring is very different? For non-resourcists, this clearly depends on both the next and current generation's preferences.<sup>105</sup>

In addition, there are two important remarks to be made at this stage. First, were we to deal with noncontemporaneous cohorts, an intergenerational (hypothetical) auction and/or insurance scheme would not be possible. However, the key fact of intergenerational overlap is such that intergenerational transfer takes place progressively and that the preferences of at least the directly next generations may find some ways of expression.

Second, there are two essential reasons why the next generation's preferences are to a large extent *within our control*. The current generation has means of directly influencing the content of

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104. See Ronald Dworkin, *What Is Equality? Part 1: Equality of Welfare*, 10 PHIL. & PUB. AFF. 185 (1981) [hereinafter Dworkin, *What Is Equality? Part 1*]; Ronald Dworkin, *What Is Equality? Part 2: Equality of Resources*, 10 PHIL. & PUB. AFF. 283 (1981) [hereinafter Dworkin, *What Is Equality? Part 2*]. On egalitarian procedures in general, see PHILIPPE VAN PARIJS, *REAL FREEDOM FOR ALL: WHAT (IF ANYTHING) CAN JUSTIFY CAPITALISM?* 60-84 (1995).

105. Cf. BARRY, *supra* note 8, at 241 (stating that demands of justice to our successors do not depend on knowing their preferences).

future people's preferences. For example, through the process of education, we participate in our children's preference formation. And determining what ethical constraints should limit the types of preferences we can inculcate to our children is a difficult question. But we can thus perfectly imagine that we would inculcate them such that they would be happy with very little, for instance, that they would be indifferent between real and plastic trees. We can see how different the results of welfare or resource egalitarianism can be in such circumstances. The other way we can influence their preferences is by *what we leave them*. For instance, if they never heard of butterflies during their upbringing and later in their lives never come across any since butterflies have all disappeared, our children are unlikely to develop a preference for observing butterflies. This raises the issue of a "diversity of options" that we shall now introduce in relation to the substitutability issue.

Notice finally, that the likely upward temporal evolution of preferences (or of needs definition, or bliss point) has an intragenerational counterpart—the problem of expensive tastes that we mentioned above.<sup>106</sup>

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106. Notice that there is an *instability* affecting these two-stage models. For Ramsey, "the possibility that future inventions will put the bliss level higher than at present appears" entails that positive savings may still be required in steady-state stage. RAMSEY, *supra* note 36, at 268. Similarly, what is regarded as needs (Marx) or as necessary preconditions for just institutions and distribution (Rawls) may well evolve through time. Unless one is a strict objectivist resourcist, this is a problem that will affect any two-stage theory. In addition, such an upward evolution may well arise in the absence of positive savings (e.g., substitution of technology to nonrenewable physical capital). The consequences can be put in two equivalent ways. Either we say that given the instability of the transition point, we tend to move constantly from the accumulation phase to the steady-state phase and back to the accumulation phase (once the upward evolution of needs, bliss, etc. has taken place), or it means that even in the steady-state stage, where we would enter once and forever, there may be phases of constancy followed by other ones of positive or negative savings. In other words, either the distinction between the accumulation and the steady-state phase is temporally unstable, or the principles applicable to the steady-state stage are temporally unstable. I shall, however, leave this instability problem aside.

*B. Limited Substitutability? The Strong-Weak Sustainability Debate*

The issue of *substitutability* is closely connected with the one of *equivalence*.<sup>107</sup> It plays an important role in the debate between "weak" and "strong" sustainability advocates.<sup>108</sup> To what extent would a generation be entitled to make up for the depletion of natural/physical capital (e.g., oil) by increasing human capital, e.g., by providing new technologies and investing in education (potential technology)?<sup>109</sup> Or, put another way, assuming that two generations regard two sets of goods as equivalent, should there not be any extra restrictions on the content of such a basket? There are empirical and normative questions at stake.

The empirical question is whether two goods are being considered by the two generations at stake as substitutes to fulfill a given set of functions. There is a sense in which every object is unique (token-uniqueness) and therefore unsubstitutable. But if we agree that what matters in a good is the *function* it fulfills, we can phrase the problem as follows. If a good, be it human-made (e.g., Brussels' Grand-Place or Van Gogh's sunflowers) or natural (the Mont Blanc or an endangered species of butterfly), is considered as the only one to be able to fulfill a function, we then need to see if *other functions* are not more important. We could argue, for example, that flooding a unique forest to build a dam would help reduce greenhouse effects

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107. See, e.g., Bryan Norton, *Ecology and Opportunity: Intergenerational Equity and Sustainable Options*, in FAIRNESS AND FUTURITY: ESSAYS ON ENVIRONMENTAL SUSTAINABILITY AND SOCIAL JUSTICE 118 (Andrew Dobson ed., 1999).

108. For an enlightening contribution on substitutability, see Dieter Birnbacher, *Limits to Substitutability in Nature Conservation* in PHILOSOPHY AND BIODIVERSITY (Markku Oksanen & Juhani Pietarinen eds.) (forthcoming 2002).

109. See, e.g., Dennis O. Olson & J. Patrick O'Brien, *The Great Alaskan Money Give Away Program*, 28 ECON. INQUIRY 604 (1990); Scott Goldsmith, *Permanent Fund Policy Questions & An Informal Review of Proposals for Change 12-17* (Nov. 1997) (paper prepared for The Alaska Humanities Forum conference entitled Principles and Interests: The Permanent Fund and Alaska's Future). For a comparison of the Alaskan versus the Norwegian situation, see THE GOV'T PETROLEUM FUND, ANN. REP. (2000), available at <http://www.norges-bank.no> (last visited Sept. 14, 2001). Notice that it would be worth investigating the extent to which The Alaskan Permanent Fund could partly implement the left-libertarian/Lockean idea of a fund. See, e.g., STEINER, *supra* note 16, at 105 (defending the idea of such a fund).

to the benefit of future generations. Can good g-2 be substituted for good g-1 to fulfill the same function f-1, and can function f-2 be substituted for function f-1?

The normative questions are, first, whether the goods only matter to the extent of the functions that they fulfill and, second, whether some less critical functions can be abandoned to the benefit of adding and/or fulfilling other ones. It is clear that, were we to refuse any substitution, this would amount to defending the view that *non-renewable* resources (e.g., oil) could not be touched. This would be *to no one's benefit*, for later generations could not touch them either. And total substitutability of *material* resources by immaterial ones (e.g., technological discoveries) is meaningless. Moreover, as soon as we adopt a per capita proviso, assuming that the population grows, we would have a lot of trouble with the idea that natural resources should be preserved without substitution (e.g., chunks of virgin Amazonian forests). This may mean that if the population grows, we should correspondingly act to artificially increase the amount of such natural resources (e.g., planting a virgin forest!).<sup>110</sup> Therefore, applying an egalitarian criterion of intergenerational justice separately to natural and human-made capital—as suggested by the notion of strong sustainability—would put us in trouble. Moreover, as stressed by Birnbacher, if we are against any sort of substitutions, why not stop the natural processes from making some species disappear (naturally) and be replaced by others?<sup>111</sup>

This being said, I think that the two key issues in this debate are as follows. First, do we need to preserve natural elements *for themselves*? If this is the case, then, restrictions on substitutability may indeed follow. However, one should make sure not to confuse the question of whether a given good is the only one capable of fulfilling a given function with whether this good is being preserved for itself. Second, as to the other normative question above, to what extent should we constrain the notion of equivalence by adding a “diversity proviso” (i.e., a clause requiring that a minimal range of options should be preserved outside of what the two generations at stake would regard as equivalent baskets of goods and functions/options)?

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110. See Barry, *supra* note 70, at 108.

111. Birnbacher, *supra* note 108, at 9.

This would not only be one way of addressing the problem of uncertainty as to future preferences. It is also the only way for the next generations to be effectively able to *modify* their preferences beyond what resulted from their education. However, maintaining a diversity of options has costs, not to mention the fact that some options may be mutually exclusive. Further research is clearly needed to assess whether a "diversity of options" target can be meaningfully defended, and whether philosophical arguments can be made in this respect.<sup>112</sup>

### VIII. ON RATES

#### A. *How to Use the Savings Rate and Benefit Ratio*

To what extent are *savings rates* and *benefit ratios* relevant to a theory of intergenerational justice? We can define a rate of savings as the percentage of "consumption goods" (broadly construed) set aside (saved) from consumption over a given period. As to a benefit ratio, it can be defined as the ratio of benefits received to contributions made over a given period.<sup>113</sup> There is a certain extent to which these concepts are clearly relevant to the matter at stake. The point I want to make here is that it will generally be misleading to put the emphasis on a *comparison* between savings rates or benefit ratio of various successive generations. Take the two following quotes. The first quote is from Rawls, who states that "the persons in the original position are to ask themselves how much they would be willing to save at each stage of advance on the assumption that all other generations are to save at the *same* rates."<sup>114</sup> The second quote is from Daniels, who claims that "one form the birth-cohort problem takes, then, is the question: What inequalities in average benefit ratios

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112. See, e.g., BARRY, *supra* note 8, at 240-41.

113. See DANIELS, AM I MY PARENTS' KEEPER?, *supra* note 2, at 118; see also VAN PARIJS, *supra* note 84, at 83.

114. See THEORY OF JUSTICE (1971), *supra* note 1, at 287 (emphasis added); see also BOURGEOIS, *supra* note 7; VAN PARIJS, *supra* note 84, at 71.

between cohorts are inequitable?"<sup>115</sup> His view is that we should "aim for approximate equality in benefit ratios."<sup>116</sup>

Whenever we want to assess whether a cohort has fulfilled its intergenerational obligations, it makes sense to look at the rate of savings the cohort implemented or at the benefit ratio that applies to it. However, what matters is the *sign* and the *figure* of such rate or ratio. The comparison with the rate or ratio of other generations is *irrelevant*. Admittedly, when a zero rate of savings is adopted, and when this is done across several generations, there is a coincidence between the two approaches. However, as soon as the savings rate starts to be either on the negative or on the positive slope (and conversely for the benefit ratio), such a coincidence disappears. If there is a negative savings rate and if each generation adopts the same negative savings rate, there is no reason—at least in principle—to think that this would constitute a fair intergenerational savings profile. And the same holds for the identity in successive generation's positive savings rate. This is not to say that the concern for an identity in positive savings rate is meaningless. It certainly connotes some idea of "equal effort."<sup>117</sup> The intuition would be that if one

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115. See DANIELS, AM I MY PARENTS' KEEPER?, *supra* note 2, at 119; see also DANIELS, JUSTICE AND JUSTIFICATION, *supra* note 2, at 278.

116. See DANIELS, JUSTICE AND JUSTIFICATION, *supra* note 2, at 278.

117. See, e.g., JOHN PASSMORE, MAN'S RESPONSIBILITY FOR NATURE: ECOLOGICAL PROBLEMS AND WESTERN TRADITIONS 91 (1974) ("We ought to try to improve the world so that we shall be able to hand it over to our immediate successors in a *better* condition, and that is all.") (emphasis added); BOURGEOIS, *supra* note 7, at 128-30, 138-39, 152 (unfolding the idea of two-fold debt: the obligation to transfer to the next generation at least as much as received, but also to do one's share of effort to contribute to the progress of humankind). Brian Barry states that:

Each generation's sacrifices (if any) to increase the capital stock it passes on give it a claim to some consideration by the following generation of its objectives in making these sacrifices. Beyond one generation, its specific wishes for the disposition of the increment become progressively less significant as constituting claims on the decisions of the living.

BARRY, *supra* note 73, at 266-67.

This amounts to saying that positive savings does not necessarily require the same rate from the next generation. It puts, however, a special burden on the next generation for it to consider the wishes of the earlier generation with special attention. This is problematic, for it implies that dead people could be harmed.

generation leaves to the next the equivalent of what it received, plus a certain surplus, it would be fair that the next generation would bother to do the same, i.e., would make a comparable effort. This appears to be the only plausible reason why an equality of rates or ratio between generations could make sense. However, first, were we to take the idea of "equal effort" seriously, it is not equal rates that we should require. In case of positive rates, they should be adjusted upwardly to the fact that the absolute amount of resources transferred (in equivalent) would keep growing. A small savings represents a much bigger effort to the poor than a savings at the same rate for a much richer person (or generation).<sup>118</sup> Second, and more fundamentally, egalitarians should remain indifferent to such an idea of "equal effort," for what they should worry about is the absolute amount that is transferred from one generation to the next.

In the use of savings rates and benefit ratios, we should not only get rid of this idea of equal effort and of its consequences (comparing the rate of one generation to the one of the next). We should also make sure not to fall back into a reciprocity-based conception when we use them.<sup>119</sup> They make sense under two conditions. First, what matters is that in principle, generational (lifetime) savings rates should be *zero* and generational (lifetime) contribution rates should be *one*. Second, we have mentioned significant exceptions above. Net transfers will indeed not necessarily be regarded as unjust as long as they can be justified e.g., on uncertainty grounds, by reference to exogenous disadvantage, or to follow the evolution of population size for which we can be held responsible.

These are key considerations to be kept in mind when we look at measurement methods such as *generational accounting*.<sup>120</sup> Generational accounts can be defined as "the present value of taxes paid

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118. See THEORY OF JUSTICE (1971), *supra* note 1, at 287.

119. See, e.g., DANIELS, JUSTICE AND JUSTIFICATION, *supra* note 2, at 135 ("Unequal benefit ratios, to the extent that they reflect net transfers of resources between cohorts, are a special case of the injustice or inequity that results from all coerced welfare redistributions.").

120. See generally LAURENCE J. KOTLIKOFF, GENERATIONAL ACCOUNTING: KNOWING WHO PAYS, AND WHEN, FOR WHAT WE SPEND (1992) (explaining and defending the generational accounting approach); Kotlikoff, *supra* note 70, at 61-108 (discussing the relevance of generational accounting for those concerned with intergenerational justice).

minus transfer payments received (net taxes) that individuals of different annual cohorts (generations) pay on average over their remaining lifetimes.”<sup>121</sup> Typically, one makes a prospective comparison between the net benefits (i.e., the benefits they got from the state *minus* how much they will have contributed over their whole life) of newly born and future generations.<sup>122</sup> One thing that generational accounting helps us to see is that a public deficit or a public debt do not necessarily entail intergenerational imbalances. On the one hand, the amount of that debt/deficit may correspond to investments that will bear most of their fruits in the future. There would be no reason why the current generation would have to fully finance what will mostly benefit the next generation(s), *ceteris paribus*. On the other hand, while countries like Norway and Japan have some of the lowest ratios of net debt to GNP, they also have among the largest generational imbalances if we apply the generational accounting method.<sup>123</sup> Thus, concepts of budgetary debt and deficit are being replaced by one of “generational imbalance.”<sup>124</sup>

Admittedly, generational accounting remains limited in scope. Since it concentrates on the public sector, it will generally ignore two essential dimensions.<sup>125</sup> First, nonfinancial transfers of environmental pollution and know-how are difficult to anticipate and/or quantify and will generally not be included.<sup>126</sup> Second, private

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121. LAURENCE J. KOTLIKOFF & WILLI LEIBFRITZ, AN INTERNATIONAL COMPARISON OF GENERATIONAL ACCOUNTS 2 (Nat'l Bureau of Econ. Research, Working Paper No. 6447, 1998), available at <http://www.nber.org/papers/w6447>.

122. See HARRY TER RELE, GENERATIONAL ACCOUNTS FOR THE DUTCH PUBLIC SECTOR 3-4 (CPB Netherlands Bureau for Econ. Policy Analysis, The Hague Memorandum 135, 1997), available at <http://www.cpb.nl/eng/pub/onderzoek/135/om135.pdf>.

123. See KOTLIKOFF & LEIBFRITZ, *supra* note 121, at 11.

124. See *id.* at 2-3 (“The imbalance in existing generational policy is calculated by assuming that future generations (those born after the base year) pay, in the form of net taxes, all of the government’s bills left unpaid by current generations.”).

125. See TER RELE, *supra* note 122, at 42-43.

126. But see Arnulf Grübler & Yasumasa Fujii, *Inter-generational and Spatial Equity Issues of Carbon Accounts*, 16 ENERGY 1397, 1399 (1991) (regarding “carbon accounts” in the climate change context). See generally, David Pearce & Giles Atkinson, *Capital Theory and the Measurement of Sustainable*



transfers taking place through the market or the family will not be taken into account either.<sup>127</sup> Then, it still remains to be seen what should be the respective part of public and private transfers (e.g., the child benefits issue)<sup>128</sup> and to what extent an increase in family transfers (intragenerationally less redistributive) can possibly compensate for reduced public transfers.<sup>129</sup> Third, even within the public sphere, some public spending (e.g., in education) is generally not included even though it clearly benefits the new generations.<sup>130</sup> Thus, although generational accounting is more comprehensive than debt/deficit accounting (because the former looks at both taxes and spending), it is still not comprehensive enough to serve as an empirical basis for a *full* normative assessment in terms of intergenerational justice.<sup>131</sup> It can, however, be one element in such an intergenerational assessment.

The concern as to the comprehensiveness of generational accounting touches on something more fundamental: One should not conclude from the existence of a generational *imbalance* (i.e., the existence of a benefit ratio different from one) that an intergenerational *injustice* would necessarily follow. It would only be the case if we remain stuck with a reciprocity-based approach. Not only can imbalances in public transfers compensate for reverse imbalances in natural resources transfers, but we have also identified above that there are circumstances where a benefit ratio different from one can be perfectly justified. We can thus conclude that generational accounting is a good starting point for developing evaluation

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*Development: An Indicator of Weak Sustainability*, 8 ECOLOGICAL ECON. 103-08 (1993) (on "green" accounting techniques); Kirk Hamilton & Michael Clemens, *Genuine Savings Rates in Developing Countries*, 13 WORLD BANK ECON. REV. 333-56 (1999); Partha Dasgupta, *Valuing Objects and Evaluating Policies in Imperfect Economies*, 111 ECON. J. C1 (2001) (using a notion of genuine investment).

127. See André Masson, *Redistribution et équité intergénérationnelle* 8 (Sept. 1995) (unpublished paper presented at the AFSE Congress in Paris, France) (on file with author).

128. See Casal & Williams, *supra* note 90, at 103.

129. See Masson, *supra* note 127.

130. See Masson, *supra* note 127.

131. Other critiques include the problem of the uncertainties involved in the multiple variables being used, the need to put the model in a general equilibrium perspective. See *id.*

methods, at least as long as it is operated outside the spirit of a commutative approach.<sup>132</sup>

*B. What's Wrong with the Social Discount Rate?*

"[I]t is assumed that we do not discount later enjoyments in comparison with earlier ones, a practice which is ethically indefensible and arises merely from the weakness of the imagination."<sup>133</sup>

Let us then briefly say a few words about the social discount rate, which is a focus point of the present symposium.<sup>134</sup> There are several theoretically separable reasons why one may prefer consuming now to investing and consuming more next year, and why one may discount the value of future benefits and costs. It is therefore always essential to ask oneself: "Discounting for what?" One reason is that one may not be sure either that the investment will indeed produce the expected fruits in the future or that one will still be alive then (risk aversion). Another reason is that one may prefer to have a smoother consumption path than a low consumption level now and a high level next year (small elasticity of intertemporal substitution). One may also expect oneself or other people to be richer in the future and that the same amount of consumption will represent less for them (or for me in a year) than for me today (diminishing marginal utility). Inflation might also be a reason to apply a discounting factor to the expected future price of future goods. Another reason is that we may simply prefer present consumption to a future one (pure

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132. An interesting question in this respect is how pay-as-you-go and funded pensions schemes respectively operate the intergenerational redistribution of the costs caused by shocks on the national income. See Fleurbaey & Michel, *supra* note 40, at 62; see also DANIELS, JUSTICE AND JUSTIFICATION, *supra* note 2, at 279 (on risks sharing across cohorts).

133. RAMSEY, *supra* note 36, at 261.

134. See THEORY OF JUSTICE (1971), *supra* note 1, at 293; JOHN BROOME, COUNTING THE COST OF GLOBAL WARMING ch. 3 (1992) [hereinafter BROOME, COUNTING THE COST]; Tyler Cowen & Derek Parfit, *Against the Social Discount Rate*, in JUSTICE BETWEEN AGE GROUPS AND GENERATIONS 144-61 (P. Laslett & J. Fishkin eds., 1992); John Broome, *Discounting the Future*, 23 PHIL. & PUB. AFF. 128-56 (1994) [hereinafter Broome, *Discounting the Future*]; Kenneth Arrow et al., *Intertemporal Equity, Discounting, and Economic Efficiency*, in CLIMATE CHANGE 1995: ECONOMIC AND SOCIAL DIMENSIONS OF CLIMATE CHANGE 125 (1996); Dieter Birnbacher, *Can Discounting Be Justified?*, INT'L J. SUSTAINABLE DEV. (forthcoming 2002).

preference for the present), be it due to perceptive (myopia) or motivational (impatience) factors.<sup>135</sup> If the social discount rate is taken as defining the extent of such a *pure* time preference, it becomes problematic as soon as *different* persons are concerned.<sup>136</sup> If, as a result of a positive savings rate, a certain amount of consumption by a future person is valued less than the same amount of consumption benefiting another person today, this would be unacceptable for most theories of justice. In addition, it becomes even more so as soon as we consider the intertemporal choice of saving lives today versus saving the same amount of lives tomorrow.<sup>137</sup> If we stick to utilitarianism and egalitarianism, both incorporate a notion of *equal respect* for people. All human beings, whatever their temporal or geographical location, no matter their genetic make-up, have an equal moral worth.

What separates these theories is the way they *translate* such an "equal respect."<sup>138</sup> Utilitarians may do so by considering all preferences (whoever their bearer) as equally important whereas egalitarians will derive from it some target of substantive equality. Thus, both for a utilitarian and for an egalitarian, there is no reason why the utility of a future person should matter less than the one of a current person.<sup>139</sup> This clearly calls for banning any non-nil social discount rate insofar as it affects persons born at different moments in time.<sup>140</sup> Or at least, the social discount rate should not be higher than the growth rate of the population.<sup>141</sup>

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135. On this "perception/motivation" distinction, see Birnbacher, *supra* note 134.

136. Rejecting discounting for time still says nothing about discounting for risk and inflation, because future people can be expected to be wealthier, etc. For each rationale, a full moral assessment is needed. But such an examination is obviously beyond the scope of this paper.

137. See Magnus Johannesson & Per-Olov Johansson, *Saving Lives in the Present Versus Saving Lives in the Future – Is There a Framing Effect?*, 15 J. RISK & UNCERTAINTY 167 (1997).

138. Dworkin, *What Is Equality?* Part 1, *supra* note 104, at 185.

139. See BROOME, *COUNTING THE COST*, *supra* note 134, at 92.

140. What is less clear is whether there would be any moral argument against preferring to consume at an early moment of one's own life, as opposed to at a later time.

141. See Fleurbaey & Michel, *supra* note 36, at 716; see also William R. Cline, *Comments: Equity and Discounting in Climate-Change Decision*, in

I shall limit myself to two remarks on this matter. First, the only way we could provide a *moral* case for some extent of discounting for time would be the following. We should first argue that it is morally defensible to give preference to people who are our *closer relatives* (e.g., one's children versus others' children, one's fellow countrywomen versus foreigners). We would then need to draw a connection between such "*affective*" (or other type of) closeness and *temporal* closeness, concluding that we may be right in privileging our *contemporaries* over members of future generations. However, the case for giving stronger moral weight to our close relatives than to foreigners is in no way a straightforward one.<sup>142</sup>

Second, an important feature of the utilitarian model is its preference for the future resulting from the idea of productivity of capital, this being aggravated e.g., as soon as we have a growing population. As we have seen, one of the utilitarian models tends to differ consumption indefinitely to the benefit of future generations (who

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ECONOMICS AND POLICY ISSUES IN CLIMATE CHANGE 98 (William D. Nordhaus ed., 1998) (arguing that there is even "so-called" *descriptive* evidence in favor of a zero rate of discount:

In my view the empirical, and thus descriptive, evidence shows that the real rate of return at which consumers can transfer consumption into the future is the risk-free real rate on treasury bills, which historically has been close to zero. There is thus a descriptive basis for saying that the rate of pure time preference is zero.).

*But see*, Cowen & Parfit, *supra* note 134, at 144 (pointing out that estimating the social rate of time preference can be done "by examining the real rate of return on the almost riskless obligations of the U.S. Treasury. This procedure usually generates discount rates between 1 and 2 percent.").

142. *See* Cowen & Parfit, *supra* note 134, at 149-50. As Birnbacher rightly remarks, this may violate *impartiality* but not necessarily the principle of *universalizability*, for as he puts it "the only thing this principle requires is to allow others to make the same temporal discriminations one is making oneself, including our own parents and grandparents." Birnbacher, *supra* note 134. In the same vein, Broome argues that a "generation neutral" function is not necessarily an impartial one, e.g., if each generation is expected to provide the same rate of savings effort. BROOME, COUNTING THE COST, *supra* note 134, at 93. The communitarian view of de-Shalit does not admit for discounting the future. However, de-Shalit clearly states that obligations towards proximate future generations are of justice whereas towards remote they are only obligations of humanity (which does not mean that they are mere obligations of charity). DE-SHALIT, *supra* note 5, at 51; *see also* THOMAS NAGEL, EQUALITY AND PARTIALITY 3 (1991) (addressing the question as to whether we owe more to our close relatives than to people that we do not know).

are always ahead) as long as this can be expected to lead to a higher transgenerational aggregate level of utility. Against such a utilitarian background, one strategy—Koopmans' theory—consists in the adoption of a positive discount rate translating a preference *for the present* to counterbalance at least in part such a preference for the future.<sup>143</sup> It will allow a planner to not systematically sacrifice the present for the future. But it violates the conception of impartiality incorporated in utilitarianism itself and is ineffective as soon as we have an infinite temporal horizon.<sup>144</sup> More fundamentally, if the reason why we introduce a positive discount rate is because we want to mitigate the consequences of intergenerational utilitarianism, then we should rather—as Rawls suggested—abandon the utilitarian model instead of amending it in such an *ad hoc* way.<sup>145</sup> It is not because more lives could be saved tomorrow (through investing our money) that we should let all our contemporaries live in misery. We should stick to our “zero rate of savings” rule, with a discounting rate adjusted to the population's growth rate.

#### IX. CONCLUSION

*“It is surely at least something to be able to assure those who spend their days trying to gain support for measures intended to improve the prospects of future generations that such measures do not represent optional benevolence on our part, but are demanded by elementary considerations of justice.”*<sup>146</sup>

We have contrasted several conceptions of justice. What did we harvest from such a comparative exploration? First, there is an unexpected convergence between a reciprocity-based and a properly construed Lockean approach of intergenerational justice. Second, I have indicated the extent to which these two approaches differ from a (maximin) egalitarian one. Clearly, the former theories are unable

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143. See Tjalling Koopmans, *On the Concept of Optimal Economic Growth*, in *ECONOMETRIC APPROACH TO DEVELOPMENT PLANNING* 225, 254 (1965); Van Liedekerke & Lauwers, *supra* note 36, at 160; Schubert, *supra* note 36, at 234; Fleurbaey & Michel, *supra* note 36, at 719-20.

144. See Fleurbaey & Michel, *supra* note 36, at 723-24.

145. See *THEORY OF JUSTICE* (1971), *supra* note 1, at 297-98.

146. Barry, *supra* note 70, at 117.

to justify a principle of prohibition of savings. Take as well the case of an exogenous disadvantage affecting the next generation. Satisfying the requirements of a reciprocity-based or Lockean approach is neither necessary, nor sufficient for an egalitarian. It is not necessary, e.g., if an exogenous and temporary disadvantage affects the current generation, or if the population is declining. In these two cases, some extent of dis-savings is allowed. It is not sufficient since we may be *required* in several circumstances to adopt a positive savings rate. Thus, the idea of borrowing the earth from our children or the definitions of sustainability as implying that we should leave at least as much as what we received to the next generation are not sufficient.

The second aim of this paper was to refine the (maximin) egalitarian approach on the matter, building upon Rawls's pathbreaking investigations. It seems difficult, even for an egalitarian, to do without an accumulation phase and I have indicated one plausible way of defending it (the priority of equal liberty defense). As to the steady-state stage, the principle of "non-dis-savings" advocated by Rawls should be regarded as unsatisfactory. I have stressed and argued for the need to prohibit savings as well. At the same time, I have specified a set of exceptions to this "zero rate of savings" principle. Theoretical difficulties remain at several levels however. Further egalitarian defenses of an accumulation phase would certainly be welcome. Moreover, a full egalitarian principle cannot be defended without a firm position on the population issue, the same being true for a Lockean theory. And an equally important issue consists in deciding which metrics egalitarians should adopt. A welfare or preference-based metrics would in turn call for important clarifications in the ethics of education, a key domain of preference-genesis.

To what extent does all this help in practice, though? It forces us to look at the basket of what we transfer to the next generation through the prism of a concept of "equivalence," having in mind the relevance of a choice of "metrics." This entails, for example, that we should not merely focus on "environmental capital" (to conclude hastily that the next generation will be much worse off than us)<sup>147</sup> but

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147. For a perspective from economic history, see ANGUS MADDISON, *THE WORLD ECONOMY: A MILLENIAL PERSPECTIVE* (2001).

that the claims of limited substitutability underlying the notion of "strong sustainability" also need to rest on firmer grounds (if any). Contrasting the commutative and the distributive logics also helps us understand that the existence of net transfers between generations is not necessarily unfair and that equality in savings rate between generations is not a requirement of egalitarian justice.

Drawing precise political conclusions is admittedly not an easier task here than in other areas, especially for egalitarians who are in principle supposed to transfer "just enough" (neither less, nor more) to the next generation. Uncertainties are huge in practice and we have stressed that prudence should not be excessive. However, well-informed accountancy techniques as well as prospective scenarios can help us a great deal. Moreover, demographic and education policies are also clearly major elements of a policy concerned with intergenerational justice. Finally, applying the maximin principle internationally is also a key towards reducing the pressure for development, insofar as the latter may imply a sacrifice of earlier generations. As we can see, all dimensions of distributive justice need to be mobilised in order to take an intergenerational path such that the worst-off people be as well-off as possible, whatever generation they are in.